FAIRFAX COUNTY, VIRGINIA MEMORANDUM

TO: Senior Management Team DATE: February 12, 2003

FROM: Anthony H. Griffin

County Executive

SUBJECT: Declaration on Air Quality Leadership

Fairfax County and the Washington metropolitan region face a difficult and complex problem regarding our air quality. Not only has the region been classified as a severe non-attainment area, based on the one-hour ozone standard stipulated in the Clean Air Act Amendments of 1990, but our poor air quality also threatens the health and well-being of everyone living and working in the region. The condition of our air makes it more likely that we will develop or aggravate respiratory and other health problems. In addition to these public health consequences, failure to adequately address our air quality problems will likely result in sanctions being imposed on our region. These sanctions would jeopardize the expansion of the region's highway and mass transit systems and would adversely affect the economic well being of our region and the Commonwealth. All of us would feel the impacts of dirtier air, more congestion and declining economic conditions.

The elected leadership of the region is working to fashion proposals to improve air quality. These proposals will require action by Fairfax County Government, not only in our role as the government responsible for implementing public programs to reduce air pollution in the largest jurisdiction in the region but also as a large corporate entity whose actions, like those of other large organizations, will impact improvements in air quality. These are responsibilities that we must take very seriously.

The Fairfax County Government will continue to take a leadership role in improving air quality. While our actions must be done in conjunction with the regional efforts being undertaken by the Metropolitan Washington Air quality Committee and the Transportation Planning Board, our stewardship must also show the way for others to follow. This means that each agency director must consider and choose the actions he or she can take to improve the air quality within the County and that are consistent with and supportive of regional efforts. It also means that we will all have to take responsibility for following, and urging others to follow, recommended actions for

Senior Management Team Page 2 February 12, 2003

improving air quality. Some of these actions will apply only on days, usually during the summer ozone season, May through September, when our air quality is more likely to violate federal standards. Others will result in permanent changes in how we do business.

For example, we must strongly favor lower-emissions vehicles in our fleet replacements. We must continue to promote alternatives to the single occupant automobile to our employees and customers, such as teleworking, transit, ridesharing and walking. Further, we must evaluate restrictions on certain types of activities, and take other appropriate measures to ensure that we will meet all applicable standards. Any failure to follow these recommended actions is a serious breach of our responsibility.

In order to address this important goal of improving air quality within Fairfax County and the region, over the months and years ahead, we will be promulgating best practices that will affect every part of Fairfax County Government. We must set an example of good corporate citizenship for other local governments and for private organizations. Our personal and organizational commitments and support are critical to achieve the highest possible air quality.

I look forward to working with you, County employees, the Board of Supervisors, boards and commissions and citizens to fully meet the challenges to improve our air quality.

AHG:RAS:gm

FAIRFAX COUNTY, VIRGINIA

MEMORANDUM

TO: Senior Management Team **DATE:** July 21, 2003

FROM: Anthony H. Griffin

County Executive

SUBJECT: Implementation of Available Ozone Action Day Best Practices

On February 12, 2003, I forwarded a memorandum entitled, "A Declaration of Air Quality Leadership" (see attachment 1) to the Senior Management Team. In this

Declaration, I asked that each of you take a leadership role by considering and choosing actions you can take to improve air quality within the County and that are consistent with and supportive of regional efforts. While we cannot solve the region's air quality problems by ourselves, we are, as noted in the Declaration, the largest jurisdiction in the region and therefore have a leadership responsibility. This memorandum follows the February 12 Declaration by providing an update on air quality planning activities and by encouraging you to pursue efforts that are available to you at this time.

On May 9, 2003, the County's Environmental Coordinating Committee (ECC), in collaboration with the Environmental Quality Advisory Council (EQAC), formally chartered an Air Quality Subcommittee (AQS) (see Attachment 2). The ECC is an interagency management committee chaired by Deputy County Executive Robert A. Stalzer. Among other responsibilities, the ECC was established to ensure an appropriate level of coordination and review of the County's environmental policies and initiatives. The ECC has representation from the following agencies: Department of Public Works and Environmental Services; Department of Planning and Zoning; Department of Vehicle Services; Department of Transportation; Fairfax County Health Department; Fire and Rescue Department; Fairfax County Park Authority; Police Department; Office of Public Affairs; Fairfax County Water Authority; County Attorney's Office; Northern Virginia Soil and Water Conservation District; Department of Management and Budget; Housing and Community Development Department; and the County Executive's Office.

The objective of the AQS is to recommend to the ECC potential County actions and best practices to improve air quality through the development of a Countywide Air Quality Management Plan (Plan). The Plan will be developed to support regional air quality planning efforts and the "Declaration on Air Quality Leadership" statement.

Senior Management Team Page 2 July 21, 2003

We are now well within the ozone season for 2003, and though the work of the AQS planning effort is ongoing, there are some Ozone Action Day best practices that can be implemented on Code Red Days at this time. For example, as noted in the Declaration, we should continue to promote to our employees and customers alternatives to the single occupant automobile, such as teleworking, transit, and ridesharing. You can encourage your staff to pursue these alternatives and publicize their availability. For example, you can encourage your employees to register for the County's telework program and, when appropriate, to arrange to take work home when a Code Red day is predicted and when other circumstances allow for such a telework day (e.g., no scheduled meetings). If you would like additional information, contact the telework program manager Carol Stuart Goldberg at: (703) 324-2862 or telecommuting@fairfaxcounty.gov. For information about transit or carpooling, including assistance in forming carpools and vanpools, please contact Dottie Cousineau at: (703) 324-1109 or Dottie.Cousineau@FairfaxCounty.gov.

In addition to the above mentioned best practices, when a Code Red Day is forecast you should encourage your employees to refuel before dawn on the Code Red Day or after dusk the day prior, restrict the use of all motorized equipment, except for essential use, restrict the use of your vehicles, except for travel that would normally be required to perform a specific job function, defer the use of oil based painting operations, and defer all mowing operations.

I look forward to working with you, County employees, the Board of supervisors, boards and commissions and citizens to fully meet the challenges to improve our air quality.

AHG:gm

APPENDIX 2A: Expanded Findings on Public Education Efforts by Other Groups. Clean Air Partners/COG

Clean Air Partners is a volunteer, nonprofit, public-private consortium. It provides the air quality, public education campaign for ground-level ozone that serves the Washington and Baltimore metropolitan regions.

According to their mission, Clean Air Partners "seeks to improve health and the quality of life in the region by educating the public to take voluntary action to reduce ground-level ozone and to reduce exposure to ozone." Created by The Metropolitan Washington Council of Governments and the Baltimore Metropolitan Council, Clean Air Partners has member-partner organizations from across the two regions—representatives of government, private sector and advocacy organizations.

The Clean Air Partners Web site has a lot of information ranging from the most basic education about the origins of ozone and its health effects to the ways the public can become involved in lowering their contributions to the problem. The site includes resources such as information for parents about health effects of ozone particular to children. It includes coloring books and curriculum aids for teachers, and presentations and resources for businesses and potential sponsors.

The site also boasts about other elements of their marketing program. According to the site "over the last decade, successful business sponsorships have enabled Clean Air Partners to leverage a modest advertising and public relations budget to achieve far greater results." Furthermore, "a radio campaign valued at \$100,000 and a cable television campaign valued at over \$220,000 were used in the summer of 2002 to promote key actions among adults to help reduce ozone and safeguard health." This campaign continued in the summer of 2003.

The message promoted in this campaign has called for the reduction of ground level ozone through a series of simple, easy, voluntary actions that can be taken by everyone without significant disruptions to their lives. Clean Air Partners actively works with the news media to broadcast warnings on radio and television weather reports. These messages alert the public of "Code Red Bad Air Days" when concentrations of ground level ozone are especially high and pose significant health risks. Through this saturation in the media, the public in this region is well aware of what the Code Red designation means and how they should modify their behavior accordingly. For more details on their efforts visit the Web site at www.cleanairpartners.net.

City of Alexandria Ozone Action Days Notifications

The City of Alexandria participates in the Ozone Action Days (OAD) program and takes many actions to educate the public and City employees about the harmful effects of

ground-level ozone. Information on the public education efforts is a central part of the Web site. The following list of strategies is undertaken by Alexandria and publicized on their Web site to help with education and outreach:

- E-mail notification sent to all City employees and City Council on the afternoon before OAD. This notification has the recommended do's and don'ts for OAD.
- Variable message boards with the message "Ozone Action Day Tomorrow/Today" as appropriate will be placed along the major commuter routes in the city. The three primary routes will be Route 1, Duke Street, and Van Dorn Street.
- OAD Flag in Market Square: Special OAD flag in Market Square on Code Red Days¹

General Education Initiatives

- A section of City's Web site
- A section of the Alexandria Rideshare Web site
- An informational display in Market Square Lobby in City Hall providing printed educational materials and daily air quality updates
- Partnerships with Alexandria businesses
- The City provides publicity regarding free rides on DASH and Metrobus on Code Red Days
- Education of City Businesses: Mailings to over 100 businesses information about the Council of Government's region wide OAD program, which employers may post in their office.
- Education of City Hall employees: Distribution of copies of educational materials to City employees
- Information regarding Ozone Action Day will be made available in newly opened Transit Store in Old Town Alexandria.²

Arlington County

Ozone Action Days Notifications

In addition to information gathered from the Arlington County Web site, their staff responded to the survey sent to all the jurisdictions.

- At this time Arlington County's notification efforts target staff, businesses and residents of Arlington; however their efforts are limited to only one venue, the County Web site.
 - 1. The Web is used to inform all three audiences when COG forecasts an Ozone Action Day.
 - 2. It is used to educate all audiences about free ART bus service on Ozone Action Days.

¹ www.ci.alexandria.va.us/tes/eq/ozone.html

² www.ci.alexandria.va.us/tes/eq/ozone.html

3. It also conveys many of the standard messages encouraging the public to modify their behavior to reduce emissions, such as telework, limit driving, refuel after dark, etc.

General Education Initiatives

- At this time Arlington County's education efforts target staff, businesses and residents of Arlington; however their efforts are limited to only one venue, the County Web site.
 - 1. It also is used to convey the various incentives offered for taking actions to reduce ground level ozone such as the 75 percent metro transit subsidies (Metrorail, Metrobus and other local transit) for staff, a walk or bike to work program, and a program providing direct financial assistance to employees to purchase a home in Arlington.
 - 2. The Web site also contains information about what causes ground level ozone, its health effects and the actions people can take to help improve air quality.
 - 3. An overhaul of the Web site is anticipated in the near future.
 - 4. They include information about the various strategies and practices that are in place to help reduce ground-level ozone.
 - 5. This emphasis on the site about their own internal best practices helps to communicate to the audience reading the Web how committed the County is to Air quality and furthermore it provides a model for businesses and other jurisdictions to emulate.
 - 6. The site also includes extensive information about their Commuter Assistance Program (CAP).
- Meanwhile Arlington CAP has been a leader in promoting the Ozone Action Days program since its inception.
 - 1. CAP has done this through distribution of materials through the County's Commuter Stores in Ballston, Rosslyn, Crystal City and Columbia Pike and through annual springtime direct mail campaigns to hundreds of Arlington employers through the Arlington Transportation Partners (ATP) Employer Services Division.
 - 2. Additionally, ATP provided My Rewards points for companies that started a program. In addition, the Web site CommuterPage.com has a lot of information on Ozone Action Days for individuals or employers in the entire region ³

Virginia Department of Environmental Quality Ozone Action Days Notifications

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³ www.co.arlington.va.us/des/ozone.htm

- While the Department of Environmental Quality is involved in the notification of Richmond area media whenever an Ozone Action Day is forecast, they rely heavily on Ride Sharers and the Lung Association to perform the public education and outreach piece for their region. At this time, they do not have any collateral materials of their own, but from time to time use the EPA brochures and fact sheets.
- They have staff who are versed in the issues associated with ground level ozone but they do not have any dedicated staff or dedicated budget dollars for a public education or outreach effort.

General Education Initiatives

 Their Web site includes general information about ozone and its impact, but unlike most other sites there are no messages pertaining to how people can modify behavior to minimize exposure to ground level ozone or decrease their contributions to it.

District of Columbia

Ozone Action Days Notifications

• The Department of Environmental Quality in the District of Columbia is responsible for notifying staff of Ozone Action Days. They do this through email. At this time no other activities take place on Ozone action days. They rely on COG and Clean Air partners to provide this notification for the region.

General Education Initiatives

Currently no general education plan is in place. Several Web pages are on the
Health Department site referencing the Air Quality Division that implements
plans and programs for meeting federal air quality standards. There is basic
information explaining what Ground Level Ozone is and its health effects for
children and adults. Information on what causes ozone and how people can reduce
their contributions to ground level ozone, along with numbers to contact for
additional information are also included.

EPA

General Education Initiatives

 The EPA has a comprehensive approach to air quality education that includes support to state agencies as well as a strong focus on attending local and national events themselves to promote awareness of air quality issues. The EPA Mid-Atlantic office based in Philadelphia was contacted to determine their level of activity in this region.

- 1. This office has a Public Information Center (PIC) onsite that stocks free general environmental publication and educational materials. These materials vary from season to season. Outside requests for publications are handled through this PIC.
- 2. Multi-media exhibits are a part of this center as well. The center even takes tour groups and can make arrangements in advance for a learning experience on any one of a variety of topics.
- 3. In additional the EPA Mid-Atlantic office has a speaker's bureau available to attend various functions and speak on air quality issues.
- 4. Representatives from the office attend at least one community outreach event per week. Often these are sponsored by some other agency for a specific cause, such as Children's Health Month, which affords the ability to address issues of children's susceptibility to ozone.
- 5. The EPA also has a press office that sends out PSAs and news releases. These messages are tied to monthly thematic communications plans as much as possible. September messages tend to relate to back to school, for instance.
- 6. An overall communications plan for the year exists as well.
- The U.S. EPA has developed the AIRNow website to provide the public with easy access to national air quality information. The website offers daily AQI forecasts as well as real-time AQI conditions for over 275 cities across the U.S., and provides links to more detailed state and local air quality Web sites.
- The AIRNow website has four primary areas:
- 1. <u>Where You Live</u> Direct access to current AQI conditions (air quality maps and animations), AQI forecasts and website links to state and local information.
- 2. <u>Air Quality Forecasts</u> Nationwide daily air quality forecasts provided by State and Local Air Agencies for over 275 major U.S. cities.
- 3. <u>Air Quality Conditions</u> Nationwide and regional real-time ozone air quality maps covering 44 U.S. States and parts of Canada. These maps are updated daily every hour.
- 4. <u>Publications</u> documentation on the Air Quality Index (AQI), air pollution health effects, and more.⁴
- In addition to this the Mid-Atlantic site provides access to a plethora of publications and educational materials not found on the AirNow site. This list of more than 100 publications can be viewed at http://www.epa.gov/reg3artd/enviroedu/material.htm.

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⁴ http://www.epa.gov/airnow/background

Montgomery County

Ozone Action Day Notifications

- Montgomery County applies similar methods in the notification of County staff, residents, and businesses regarding Ozone Action Days.
 - 1. Montgomery County sends e-mail notifications, puts messages on their Intranet and their Web site and signs placed in the lobby area, to convey this crucial and time sensitive message.
 - 2. They also have an Ozone Action Day Hotline on which messages are placed to notify County residents when COG forecasts an Ozone Action Day.
 - 3. They were asked about the use of various other media such as use of faxes, displaying the OAD flag and a message on their cable network, but none of these methods is used currently.
- The notifications include basic information about ground level ozone, what causes it and its negative health effects, as well as information about actions the audience can take on OADs to help protect the environment. These messages include:
 - 1. Carpool
 - 2. Telecommute, or take mass transit (Ride transit free on OADs)
 - 3. Brown-bag your lunch
 - 4. Defer driving or combine trips and refuel after dark
 - 5. Postpone use of gasoline powered lawn equipment; and don't use oil-based paints aerosols and household products with solvents.
- While these messages encourage environmentally responsible behavior, no
 incentives are offered to employees to entice them further to modify their
 behavior. Unfortunately, there is no mechanism in place for measuring the
 effectiveness of these messages.

General Education Initiatives

- Montgomery County uses a variety of methods to reach out to the public and educate them about ground level ozone, including its health effects and the actions people can take to help improve air quality. While there is no formal marketing plan, there is a significant organized effort to get the word out. These methods include:
 - 1. The use of brochures
 - 2. The Web site
 - 3. County Cable programming

No separate special efforts are made at this time to educate businesses about these issues.

- Staff in Montgomery County is reached through some additional tools. These include:
 - 1. E-mail notifications
 - 2. Employee internal cable programming

- 3. Signage in the lobby of the government building
- 4. Fact sheets
- The brochures and fact sheets are updated each year with any new and pertinent information. The pieces are distributed throughout the community in a variety of ways.
 - 1. The Department of Environmental Protection has direct mail pieces that are sent to County residents upon request.
 - 2. Other brochures are handed out at community events and displayed in brochure racks in County government buildings.
 - 3. Roughly 100-350 copies of fact sheets and brochures are distributed each year through these methods. A copy of the fact sheet is included in the appendix to this report.
- The Department of Environmental Protection has an extensive section on air quality on their Web site. During ozone season there is a link directly to this information on the home page of the (DEP section of the Montgomery County Web site).
 - 1. Staff within the Department of Environmental Protection are responsible for maintenance of the site and creating the messages that go up.
 - 2. A fixture on the County site for the past 3-5 years the pages are updated annually for each ozone season.
 - 3. A fact sheet is not currently available on the Web site but is going to be added soon. Furthermore, additional fact sheets are being developed to go on this site as it becomes more standardized in its look and feel/layout/design.
 - 4. Visitation to this section is estimated at 3,200,000 per year with its peak in the summer months.
- There are many references related to ground-level ozone such as, Examining your vehicle fleet, alternative transportation, methane information, how it is formed and how it contributes to ground-level ozone, a regulatory fact sheet on open burning and its contributions to ground level ozone.
- Additionally information on special programs such as the Lawn and Garden Equipment Rebate and Exchange Program otherwise known as "Cash for Clunkers" is included on the Web site.

Prince George's County

Ozone Action Day Notifications

 Notifications are placed on the County Web site as well as their Air Quality hotline when a Code Red day is forecast. It is unknown at this time if any additional notification methods are used.

General Education Initiatives

• The Prince George's County Web site has a very good FAQ section on air quality.

- 1. It addresses various issues such as:
- 2. The sources of ground level ozone and its prevention,
- 3. Actions taken by the County to notify the public about ozone action days
- 4. How people can and should modify their behavior to minimize time spent outside on Code Red days and to decrease their contributions to the ozone.
- 5. The information also explains who is at the greatest risk on these days, and what steps the County and the region as a whole are taking to reduce overall air pollution.
- The FAQs which appear to be the only ozone related information on the Web site are very difficult to locate. It can only be found by using the search engine and querying for very specific keywords.

Appendix 2-B

Fairfax County Air Quality Subcommittee Public Education and Outreach Survey

Thank you for taking the time to fill out this survey to help us to get a general sense of what other jurisdictions are doing to increase public awareness about ground level ozone and its health effects and the actions people can take to help improve air quality. Your responses will be used as part of a findings documents that will gauge what local jurisdictions are doing to get residents and workers involved in improving the air quality in the Metropolitan Washington region. If you are interested in receiving the results of this survey, please indicate that with your response and we can provide them to you at a later date.

1.	Do you currently notify your staff, residents and businesses in your jurisdiction when COG forecasts an Ozone Action Day? Yes No (Go to question 4)
2.	What actions do you currently take to notify your staff quickly if COG forecasts an Ozone Action Day? (Check all that apply.) □ E-mail notifications or e-newsletter □ City/County Web site or Intranet □ Voicemail messages □ Memos □ Signs or message boards □ Display OAD flag □ Message on City/County Cable Channel □ Faxes □ Other (please explain)
3.	What actions do you currently take to notify your residents and businesses quickly if COG forecasts an Ozone Action Day? (Check all that apply.) ☐ City/County Web site ☐ News Releases

	□ E-mail notifications or e-newsletter □ Signs or message boards □ Display OAD flag □ Message on City/County Cable Channel □ Faxes □ Other (please explain)
4.	Do you notify staff of actions they can take to protect the environment or of transit, carpooling and teleworking options available to them on Ozone Action Days? Yes (please explain) No
5.	Do you offer your employees any incentives for taking actions that can help to reduce emissions on Ozone Action Days? Yes (please explain) No (Go to question 7)
6.	Do you measure the effectiveness of these incentives? If yes, how? Yes (please explain) No
7.	Do you measure the effectiveness of these methods of notification to staff, residents businesses? If yes, how do you measure? Yes (please explain) No (Go to question 9)
8.	If you measure the effectiveness of your methods of notification, which methods are the most successful in reaching the public?
9.	Do you have a formal marketing plan for overall public education and outreach about ozone and air quality issues related to ozone? Yes No (Go to question 12)
10.	If yes, who is responsible for deciding the elements of the marketing plan?
11.	If you have a marketing plan, can you please provide us with a copy of it along with any information on Ozone Action Day alerts and general education?
12.	Do you currently educate residents of your jurisdiction about ground level ozone including its health effects and the actions people can take to help improve air quality? Yes No (Go to question 14)
13.	If so, how do you educate them? ☐ Brochures and other collateral materials ☐ County/City Web site ☐ News Releases ☐ Ads at transit facilities or on buses or rail cars

	☐ County/City Cable programming ☐ Water Authority mailings
	□ Direct mail
	□ Paid advertisements
	☐ Television
	□ Radio
	□ Newspapers
	☐ Other (please explain)
14.	Do you currently educate businesses in your jurisdiction about ground level ozone including its health effects and the actions people can take to help improve air quality? Yes No (Go to question 16)
15.	If so, how do you educate them?
	☐ Brochures and other collateral materials
	☐ County/City Web site
	□ News Releases
	Ads at transit facilities or on buses or rail cars
	☐ County/City Cable programming
	☐ Water Authority mailings ☐ Direct mail
	□ Paid advertisements
	☐ Television
	□ Radio
	☐ Newspapers
	☐ Other (please explain)
16.	Do you currently educate your staff about ground level ozone including its health effects and the actions people can take to help improve air quality? Yes No (Go to question 18)
17.	If yes, what additional methods do you use to educate your organization's employees? (Check all that apply.) ☐ Internal newsletter
	☐ E-mail notifications or e-newsletter
	☐ Pay stubs
	☐ City/County Employee Internal Cable Programming
	□ Posters and signage
	☐ Tabletop tent cards
	☐ Other (please explain)
18.	If you use paid advertising to educate these audiences, please explain in detail your advertising budget for each type of media per year. Attach additional pages if necessary. Television
	Radio

	Newspapers
	Internet_
	Other (please specify)
19.	Please explain your advertising schedule for each year. Attach additional pages if necessary. Television
	Radio
	Newspapers
	Internet
	Other (please specify)
20.	Could you please provide us with scripts from television or radio ads, and tear sheets or hard copies of any print ads, if possible?
21.	Do you have sponsors who assist you with financing these promotional initiatives? ☐ Yes ☐ No
22.	Please explain in detail your sponsorship program.
23.	If you send news releases, please tell us how often and when you send them each year?

24. If you have brochures or other collateral materials how often do you update them?

	 □ Once a year □ Once every other year □ Once every three years or more
25.	How do you distribute brochures or collateral materials? (Check all that apply.) □ Direct Mail □ Brochure racks in libraries □ Brochure racks in transit stations □ Community events □ Brochure racks in malls □ Brochure racks in county government buildings □ Other (please explain)
26.	How many brochures and other collateral pieces do you distribute each year? □ 0-100 □ 350-500 □ 100-350 □ More than 500
27.	Could you please provide us with hard copies of any collateral pieces you produce, if possible?
28.	Are there Web pages related to ozone on your Web site? Yes (please write the direct link in the blank) No
29.	How would one find them if not using the search tool?
30.	Do you think they should be placed more prominently?
31.	Who is responsible for maintaining the information and deciding the message?
	How long have the pages been a part of your site? ☐ 6 months ☐ One year ☐ 3-5 years ☐ 5 years or more
33.	How often are the pages updated? ☐ Continuously, as needed ☐ Every six months ☐ Once a year ☐ Once every other year ☐ Once every three years or more
34.	Do you have your brochures and other collateral materials on the Web site? ☐ Yes ☐ No
35.	Is there a section of these Web pages targeted to children? ☐ Yes (please write the direct link in the blank)

	□ No
36.	Are any design changes pending on the Web site? ☐ Yes (please explain)
	□ No
37.	How many people visit these pages per year?
38.	Is there a peak time of year for visitation?

Please return completed forms to Angela Morlu by Wednesday, Sept. 17, via fax at 703-324-2010 e- mail to amorlu@fairfaxcounty.gov or mail to the Office of Public Affairs, 12000 Government Center Parkway, Suite 551, Fairfax, VA 22035.

APPENDIX 3A: AIR QUALITY POLICY GUIDANCE IN FAIRFAX COUNTY'S COMPREHENSIVE PLAN

(http://www.co.fairfax.va.us/gov/ocp/comprehensiveplan/default.htm)

Of the nineteen goals that have been adopted by the Fairfax County Board of Supervisors, two include statements that are clearly related to air quality:

"Transportation - Land use must be balanced with the supporting transportation infrastructure, including the regional network, and credibility must be established within the public and private sectors that the transportation program will be implemented. Fairfax County will encourage the development of accessible transportation systems designed, through advanced planning and technology, to move people and goods efficiently while minimizing environmental impact and community disruption. Regional and local efforts to achieve a balanced transportation system through the development of rapid rail, commuter rail, expanded bus service and the reduction of excessive reliance upon the automobile should be the keystone policy for future planning and facilities. Sidewalks and trails should be developed as alternate transportation facilities leading to mass transit, high density areas, public facilities and employment areas."

"Environmental Protection - The amount and distribution of population density and land uses in Fairfax County should be consistent with environmental constraints inherent in the need to preserve natural resources and to meet or exceed federal, state and local standards for water quality, ambient air quality and other environmental standards. Development in Fairfax County should be sensitive to the natural setting, in order to prevent degradation of the County's natural environment."

Other goals, such as those addressing land use, revitalization, and regional cooperation, also have a relationship to air quality.

POLICY PLAN GUIDANCE

As noted in Chapter 3 of this document, most of the guidance in the Comprehensive Plan related to air quality can be found in the Policy Plan volume of the Plan. Excerpts from the Policy Plan that are provided in this Appendix have been taken from the 2002 Edition of the Policy Plan

Direct guidance on air quality matters can be found in the Environment section of the Policy Plan. The following excerpt can be found of page 3 of the Environment section:

"Air Quality

The County has not attained federal air quality standards for ozone.

High ozone concentrations can adversely affect human health. The Washington, D.C. area has not met the Environmental Protection Agency's (EPA) standard for ozone since that standard was established. High ozone concentrations result from the interactions of

oxides of nitrogen and hydrocarbons with sunlight In Metropolitan Washington, sources of emissions of oxides of nitrogen include utilities, other point sources, motor vehicles and from natural sources. Sources of emissions of hydrocarbons include motor vehicles, small area sources (e.g. surface coatings, lawn and garden equipment, solvent use) and vehicle refueling.

High carbon monoxide (CO) concentrations are also harmful to human health. While high CO concentrations can potentially occur in "hot spots" near points of traffic congestion, Fairfax County is considered to be in attainment of federal carbon monoxide standards. Other monitored air quality indicators in Fairfax County comply with state and federal standards.

Objective 1: Preserve and improve air quality.

Policy a. Establish land use patterns and transportation facilities that encourage the use of public transportation and reduce trip lengths to reduce emissions of oxides of nitrogen, carbon monoxide, and hydrocarbons from automobiles.

Policy b. Implement transportation strategies that reduce auto travel and improve traffic flow, thereby reducing auto emissions.

Policy c. Apply state of the art technology toward the reduction of emissions from stationary sources of air pollution.

Policy d. In cooperation with federal, state and regional agencies, bring Fairfax County into compliance with federal primary and secondary national air quality standards as soon as possible.

Development proposals that are projected to cause a substantial increase in auto related air pollutants should provide a transportation management strategy which minimizes dependence on single occupant automobiles.

Proposals for significant new stationary sources of air pollutants should implement appropriate control technologies."

A direct reference to air quality can also be found in the Transportation section of the Policy Plan as follows:

"Objective 6: Transportation facilities and services should be provided in a manner that minimizes community disruption and adverse environmental impacts.

Policy c. Adopt strategies to reduce automobile emissions in order to help the region attain and maintain the National Ambient Air Quality Standards."

Aside from recommendations to locate and design childcare facilities to protect children from excessive exposure to air pollutants, Policy Plan references to air quality are limited to the excerpts provided above. However, land use and transportation guidance is very strongly related to air quality. A central focus of the Comprehensive Plan is that

population and economic growth should be concentrated in mixed use growth centers, thereby protecting stable residential communities and reducing burdens to the County's transportation system. This focus is evident in the following objective statements as excerpted from the Land Use and Transportation sections of the Policy Plan:

Land Use

- "Objective 2: Fairfax County should seek to establish areas of community focus which contain a mixture of compatible land uses providing for housing, commercial, institutional/public services, and recreation and leisure activities."
- "Objective 4: The County should encourage a diverse housing stock with a mixture of types to enhance opportunities for County residents to live in proximity to their workplace and/or in proximity to mass transit."
- "Objective 5: Fairfax County's planning efforts should be cognizant of the role that the County plays in regional growth and development."
- "Objective 6: Fairfax County should have a land use pattern which increases transportation efficiency, encourages transit use and decreases automobile dependency."

Transportation

- "Objective 1: Fairfax County should provide for both through and local movement of people and goods through a multi-modal transportation system that places the maximum practical emphasis on alternatives to the single-occupant automobile."
- "Objective 2: Fairfax County should seek to increase the number of commuters using non-motorized transportation and public transportation (i.e., rail, bus, carpooling and vanpooling) so that by the year 2000, 60% of County commuters to the metropolitan core, 20% of the commuters to the Tysons Corner Urban Center, 15% of the commuters to Suburban Center and Transit Station Areas and 5% of other County commuting work trips will use public transportation, and 3% of all trips will be made by non-motorized (pedestrian and bicycle) transportation."
- "Objective 3: Fairfax County should provide a road system that provides adequate local access and capacity for through movements, consistent with financial, social, and environmental constraints and with the County's goal of reducing commuting by single-occupant automobile."
- "Objective 4: A comprehensive network of trails and sidewalks should be provided as an integral element of the overall transportation network."
- "Objective 10: Fairfax County's land use and transportation policies should be complementary."

"Objective 14: Fairfax County should address the transportation challenges associated with continuing trends in suburb-to-suburb commuting patterns and the resulting need to facilitate employee access to major employment areas within the County."

Numerous supporting policy statements are provided subsequent to the above objectives; while these statements are too numerous to reproduce here, they do provide support to measures that can serve to reduce air quality degradation such as the concentration of development in mixed use centers, provision of transit service, support for transportation demand management (TDM) efforts, carpooling/ride sharing, nonmotorized transportation, high occupancy vehicle lanes, and revitalization. In addition, similar policy language can be found under other Transportation and Land Use objectives. Further, the Residential Development Criteria (used in the evaluation of residential zoning requests) include a criterion supporting transit, transportation management, and facilities supporting nonmotorized transportation.

The Environment section of the Policy Plan also contains an objective that reads as follows:

Objective 13: Maintain and enhance the efficient use of natural resources.

Policies relating to this objective support energy conservation.

The Policy Plan's glossary also includes definitions for a number of air quality-related terms.

AREA PLAN GUIDANCE

Direct references to air quality in the four Area Plans are not prevalent. Where present, these references are limited geographically and generally reiterate or augment the Policy Plan guidance noted above. The following are examples of such references:

- Plan recommendations for the Engineer Proving Ground (Franconia-Springfield Area) include a target of a 15 percent or greater non-single occupant vehicle mode split, which will "contribute to the County's efforts to improve air quality in the region."
- Guidance for the South Village area of Kingstowne (Rose Hill Planning District, Lehigh Community Planning Sector) recommends "... methods to control erosion and sedimentation and water or air pollution."
- Plan text for the Lorton-South Route 1 Community Planning Sector (Lower Potomac Planning District) recommends consideration of "noise and air quality impacts in the assignment of land use to abutting or neighboring parcels and in consideration of traffic to be generated by such use."

- Plan text for Sub-unit N4 of the Fairfax Center Area calls for the consideration of air quality impacts in the siting of a bus maintenance facility.
- Plan text for the Fairfax Center Area includes a reference to air quality improvement as one of several purposes for natural resource preservation.

While direct references to air quality in the Area Plans are limited, much of the Area Plan guidance, as developed from the "Concept for Future Development and Land Classification System," supports development decisions that will concentrate development in transit-oriented, pedestrian-friendly growth centers.

APPENDIX 3B: REGIONAL AIR QUALITY POLICY GUIDANCE AND AIR QUALITY POLICY GUIDANCE FROM A SELECT NUMBER OF OTHER JURISDICTIONS

REGIONAL AIR QUALITY POLICY

Much of the regional air quality planning effort is oriented toward the development of strategies to reduce air pollutant emissions to comply with federal air quality requirements. However, air quality planning in the area influences transportation planning and policies significantly. The mission of the Metropolitan Washington Air Quality Committee (MWAQC), which is the central air quality planning entity for the region, is to "conduct interstate air quality attainment and maintenance planning for the Washington, D.C.-Maryland-Virginia Metropolitan Statistical Area." MWAQC focuses its efforts on air quality compliance rather than the development of regional air quality policy.

The National Capital Region Transportation Planning Board (TPB), which like MWAQC is coordinated through the Metropolitan Washington Council of Governments, has a Vision--a policy document with eight broad goals to guide the region's transportation investments. The Vision Statement, which is only three sentences, includes the phrase: "This [transportation] system promotes the region's economy and environmental quality..." Goal 5 explicitly addresses environmental quality: "The Washington metropolitan region will plan and develop a transportation system that enhances and protects the region's natural environmental quality, cultural and historic resources, and communities." Objective 4 is: "Compliance with federal clean air, clean water and energy conservation requirements, including reductions in 1999 levels of mobile source pollutants."

OTHER JURISDICTIONS

Due to time limitations, the Air Quality Subcommittee has not been able to conduct comprehensive research on the comprehensive planning/air quality policy approaches taken by other jurisdictions; however, the Subcommittee has been able to review comprehensive/general plans from a select group of jurisdictions in order to identify whether there may be approaches that are different from that taken by Fairfax County. It is fully recognized that there are many other jurisdictions with air quality discussions in their plans, and that many of these jurisdictions may have air quality policies and programs that are as, or more, thorough than the jurisdictions discussed here. Jurisdictions selected for review include localities in the Metropolitan Washington area, jurisdictions in Southern California, jurisdictions suggested by the American Planning Association, and other jurisdictions identified by Subcommittee members.

Washington, D.C. (http://planning.dc.gov/documents/index_comprehensive.shtm)

The District of Columbia's Comprehensive Plan contains broad goals, objectives, and policies in eleven broad topical areas as well as specific recommendations within each of the City's eight Wards. The City's objective regarding the improvement of air quality can be found in the Environmental Protection Element of the Comprehensive Plan and reads as follows: "The objective of improving air quality is to improve the quality of air in the District and the region so as to meet public health and environmental standards." Policies provided subsequent to this objective read as follows:

- "a. Maintain and enforce the air quality implementation programs of the District which at least equal the National Ambient Air Quality Standards;
- b. Strive for full regional acceptance and attainment of appropriate air quality standards;
- c. Promote land use patterns and transportation services which decrease reliance on automobiles for commuting and other routine trips. (Measures which reduce dependence on automobiles for a significant number of trips are essential to a reduction of regional air pollution. Clustering of residences, shopping, and work places where they can be served efficiently by Metrorail or frequent bus service promotes this essential independence.):
- d. Evaluate potential air quality emissions related to new and expanded development in the District, including those needed to provide municipal services, such as water supply and treatment, to ensure that adequate controls are implemented for avoiding deterioration of air quality concentrations;
- e. Develop and implement a radon testing program to be made available to each resident at a nominal fee:
- f. Require standards for asbestos abatement work in the District, including licensing and inspection, to ensure adequate protection of the health and safety of asbestos abatement workers and commercial and residential occupants of buildings where asbestos work is performed;
- g. Promote the use of alternative fuels, carpooling, mass transportation, bicycles; and other means to reduce the use of automobiles and resulting air pollution; and
- h. Upon evidence of alleged violation of the national ambient air quality standards, the Department of Consumer and Regulatory Affairs ("DCRA") shall investigate within ten (10) days and, if DCRA finds a violation, shall issue and make available to the public within thirty (30) days a written report of its investigation of the violation which shall include documenting evidence and recommendations."

Additional air quality-related guidance within the Environmental Protection Element stresses energy conservation and regional coordination. The Transportation Element recognizes the need to comply with Clean Air Act requirements, supporting regional air quality efforts through the emphasis of mass transit over the use of the private automobile, through the provision of high density, mixed use development to promote higher density residential development "at strategic locations, particularly near appropriate Metrorail stations," through the establishment of private sector transportation demand management programs, through the promotion of nonmotorized transportation, and through other efforts to reduce dependence on the automobile. Guidance within the Land Use Element of the Comprehensive Plan further promotes "the establishment and growth of mixed use commercial centers at appropriate Metrorail stations and major transportation interchange points . . ."

Montgomery County, Maryland (http://www.mc-

<u>mncppc.org/community/general_plans/general_plan_refinement1993/gen_plan_refinement1993.shtm)</u>

The foundation of Montgomery County's planning efforts over the last several decades is the 1964 "Wedges and Corridors" plan, which recommended the concentration of growth along development corridors, with lower density "wedges" to be located between the corridors. This 1964 "General Plan" was updated in 1969 and refined in 1993; the refined document continues to provide "a comprehensive framework for guiding physical development and managing limited resources" in the County and to provide a framework within which more detailed plans (master plans, sector plans, and functional plans) are undertaken. Like Fairfax County's Policy Plan, Montgomery County's General Plan does not provide parcel-specific land use recommendations and "does not delve deeply into County governance beyond the purview of land use planning."

Air quality policy in Montgomery County's General Plan is stated succinctly in the Environment section as follows:

"Objective 7: Protect and improve air quality.

Strategies:

- A. Attain federal air quality standards
- B. Promote improved air quality through land use planning and regulation; where possible, consider the effects of land use proposals on air quality.
- C. Identify land use policies that support environmentally preferable travel alternatives.
- D. Develop land use policies to save energy and improve energy conservation."

In the Land Use and Transportation sections of the General Plan, the goals, objectives, and strategies stress:

- Compact development oriented in centers that fosters the use of transit and reduces trip lengths;
- The creation of an environment that is conducive to nonmotorized transportation; and
- the pursuit of activities to reduce trips and improve the efficiency of use of the existing transportation network (e.g., flexible work hours, telecommuting, transportation management districts).

Montgomery County's Council recently adopted a "County Environmental Policy" to provide an overarching County environmental policy under which environmental initiatives are considered. This Policy addresses environmental impacts of operations of County departments and agencies rather than broader air quality issues. The Policy

resulted in the establishment of an interagency "Environmental Policy Implementation Task Force," which has developed a draft "Issues and Actions Report" outlining potential best practices that can be taken by County agencies to address a broad range of environmental issues, including ambient air quality. Ultimately, agency-specific Environmental Action Plans will be developed.

Montgomery County's Department of Environmental Protection is developing an Air Quality Strategy document that will provide direction regarding actions the County can take to reduce emissions from a variety of sources. A draft of this strategy document addresses air quality issues comprehensively and includes sections addressing monitoring, area source emissions, point source emissions, mobile source emissions, greenhouse gas emissions, tree canopy and forest cover, emissions from County fleets and operations, and public outreach campaigns. With respect to land use policy, a draft of the Strategy document includes a recommendation that "land use planning should encourage high density housing around metro stops along with pedestrian friendly alternatives to remove single occupant vehicles." The draft further recommends the integration of "hiker/biker trails and sidewalks to facilitate travel to shopping and work/activity centers."

Information about air quality efforts of the Department of Environmental Protection and related actions addressing the County's Environmental Policy can be found at: http://www.montgomerycountymd.gov/sitehead.asp?page=/mc/services/dep/index.html

Prince Georges County, Maryland

(http://www.mncppc.org/cpd/PDFs/GenPlan.pdf)

Prince George's County's General Plan addresses development patterns in developed, developing, and rural "tiers" of the County, development in centers and corridors, and a number of topical elements with a countywide emphasis (environmental infrastructure, transportation systems, public facilities, economic development, housing, revitalization, urban design, and historic preservation). Aside from a passing reference to air quality as a benefit of providing tree cover, the General Plan does not contain explicit references to air quality. However, the General Plan targets growth to a limited number of designated "Centers and Corridors" and stresses "mixed-use, transit-oriented and transit-supported development" in these areas. Policies in the General Plan focus on mixed use development, transit-oriented development, pedestrian-oriented development, revitalization, and a multimodal transportation system that supports land use goals. A policy in the "Environmental Infrastructure" element also supports energy conservation.

Arlington County, Virginia (The Comprehensive Plan is not available on the Web. The Web site describing the Plan can be found at the following address: http://www.co.arlington.va.us/cphd/planning/plan/index.htm)

Arlington County's Comprehensive Plan does not directly address air quality. However, goals and objectives within the County's Comprehensive Plan include the following concepts:

- The concentration of "high density residential, commercial and office development within designated Metro Station Areas in the Rosslyn-Ballston and Jefferson Davis Metrorail transit corridors;"
- The promotion of "mixed use development in Metro Station Areas . . .;"
- The encouragement of "construction of a variety of housing types and high-rise dwelling units within designated Metro Station Areas;" and
- The concentration of land use densities near Metro stations.

City of Alexandria, Virginia (The Master Plan is not available on the Web. The Department of Planning and Zoning Web site address is: http://www.ci.alexandria.va.us/city/planning_zoning/pl_zn_home.html)

Alexandria's Master Plan does not have a distinct section explicitly addressing air quality. However, the need to consider air quality implications of new development and redevelopment is recognized within a policy addressing Traffic Impact Studies associated with such development proposals, and an objective in the Transportation section of the Plan supports reduced air pollution from transportation activities. In addition, a strategy identified in the "Community Facilities" section of the Master Plan states: "Air quality should meet or exceed all air quality standards set by the Commonwealth of Virginia and the U.S. Environmental Protection Agency; the City should maintain an active monitoring program and take aggressive action against polluters." Further, the goals, objectives, and policies in the Master Plan include the following concepts:

- The general promotion of mixed use, pedestrian-oriented development;
- A preference for locating "large scale and high density office concentrations" near Metrorail stations, with a promotion of mixed use development in these areas;
- Support for intensive development within a 1,000 foot radius of Metrorail stations (except in areas where such development would be incompatible with existing residential neighborhoods);
- Support for increased availability and use of public transportation options, including the construction of a new Metrorail station to serve the Potomac Yard area;
- Expansion of nonmotorized transportation opportunities;

- Establishment of Transportation Management Areas in several areas of the City; and
- Expansion of the usage of multi-occupant vehicles.

Prince William County, Virginia: (http://www.co.prince-william.va.us/planning/manuals/cp2003.htm)

Prince William County adopted a revised Comprehensive Plan in June 2003. The Plan contains a series of sector plans for specific areas as well as chapters with a Countywide orientation outlining goals, objectives, policies, and action strategies for the following: Community Design; Cultural Resources; Economic Development; Environment; Fire and Rescue; Housing; Libraries; Long-Range Land Use; Parks and Open Space; Potable Water; Schools, Sewers; Telecommunications; and Transportation. The Environment chapter of the Plan contains a policy to "Improve air quality within Prince William" County." There are twelve "Action Strategies" associated with this policy, including actions to be taken during the zoning process, actions related to monitoring, actions related to land use and transportation planning (e.g., encouraging mixed use projects in compact urban growth areas), and actions related to regional coordination. The Long-Range Land Use chapter does not directly reference air quality, and such references in the Transportation chapter are limited to action strategies promoting the use of transit vehicles that are designed to reduce air quality impacts and the provision of nonmotorized transportation facilities. However, policies and action strategies within these chapters promote a greater emphasis on transit and transit-oriented development and improved nonmotorized transportation opportunities.

Loudoun County, Virginia

(http://inetdocs.loudoun.gov/bos/docs/boscompplanrevi_/revisedcompplan_2/revisedge_neralp_/index.htm)

Loudoun County's General Plan identifies several Geographic Planning Policy Areas, each with a recommended development pattern. Loudoun County's approach serves to focus higher densities of development around transit nodes and urban centers in suburban areas, with densities transitioning downward away from these areas. Low densities of development are stressed in rural portions of the County, and the clustering of development and the preservation of elements of the County's "Green Infrastructure" are stressed throughout the County.

The "Green Infrastructure" portion of the County's General Plan includes a section addressing air quality. Introductory text in this section recognizes several sources of air pollutants (automobile emissions, aircraft emissions, heating furnaces, and power plants) as well as the relationships between air quality and transportation, tree preservation, and other natural area preservation efforts. The text also recognizes that the County's land use planning approach ("planning development in locations that are close to major transportation facilities and transit nodes, reducing the densities in the Rural Policy Area,

and promoting and implementing alternative modes of transportation") supports air quality protection. Five policies are presented, each of which is provides a direction for County action:

- Development of air-quality sensitive land use and transportation policies and measures (reducing vehicular trips and vehicle miles traveled while supporting nonmotorized transportation facilities and transit options);
- Promotion of tree planting and preservation;
- Enforcement of open burning restrictions;
- Support of the State Implementation Plan; and
- Participation in regional air quality and transportation planning efforts.

City of Los Angeles, California

(http://www.lacity.org/PLN/Cwd/GnlPln/Elements.htm)

The State of California requires each city and county to adopt a long-term comprehensive general plan. The City of Los Angeles' General Plan contains a "Framework Element" that provides a policy foundation for the development of 35 detailed Community Plans; this element contains discussions of issues in seven thematic areas (Land Use, Housing, Urban Form and Neighborhood Design, Open Space and Conservation, Economic Development, Transportation, and Infrastructure and Public Services) and goals, objectives, and policies for most of these thematic areas. While air quality is not an explicit component of the Framework Element, the implications of land use planning on air quality are recognized, and one of the objectives in the Land Use section of the Framework Element reads as follows: "Provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicular trips, vehicle miles traveled, and air pollution." Subsequent policy statements reinforce this objective.

In addition to the Framework Element, the City's General Plan includes 10 citywide elements and the Community Plans. One of the citywide elements is the "Air Quality Element," which provides a discussion of statutory requirements and related regional air quality planning efforts, a summary of air quality conditions and trends, and a discussion of air quality issues facing the City. The Air Quality Element also sets forth broad goals, objectives, and policies related to air quality. The Element's six goals are as follows:

- "1. Good air quality and mobility in an environment of continued population growth and healthy economic structure.
- 2. Less reliance on single-occupant vehicles with fewer commute and non-work trips.
- 3. Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques.

- 4. Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.
- 5. Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting.
- 6. Citizen awareness of the linkages between personal behavior and air pollution, and participation in efforts to reduce air pollution."

These statements are not limited in scope to land use-related matters; rather, they are comprehensive in nature and include a number of programmatic statements (e.g., providing measures to reduce vehicle trips and vehicle miles traveled by City employees; providing public transit; controlling vehicular traffic flow; providing public education; etc.) The Air Quality Element concludes with a reference to the City's Clean Air Program, which is described as "the City's blueprint for achieving federal, state, regional and local air quality goals" and is considered to be the implementing document for the broad air quality goals, objectives, and policies of the Air Quality Element.

Los Angeles County, California (http://elib.cs.berkeley.edu/cgibin/doc_home?elib_id=791)

The County of Los Angeles General Plan is described as:

"... a unified statement of public policy for use in making decisions on critical public issues. The Plan provides a framework for coordinating short and medium range actions designed to meet needs and to prevent problems from becoming crises. It sets forth guidelines for how the County of Los Angeles should allocate its resources in meeting identified needs over the next few decades. The General Plan is primarily a public interest tool for initiating and responding to change."

The General Plan is an advisory document providing general policy direction for the future of the County. As such, it is not intended to be a blueprint for action. The full version of the General plan includes three other volumes: the Background Report, Implementation, and an Environmental Document. These three volumes are available in paper only and have not been reviewed.

The General Plan contains general goals and policies as well as chapters addressing specific planning issues (Land Use; Circulation; Housing; Conservation, Open Space, and Recreation; Noise; Safety; Public Facilities; and Economic Development). Each chapter contains a few pages of introduction, background, and maps, followed by a series of goals supported by numbered policies. One goal (in the chapter on Conservation, Open Space, and Recreation), specifically addresses air quality ("Support local efforts to improve air quality"). That goal has one supporting policy ("Actively support strict air quality regulations for mobile and stationary sources, and continue research to improving air quality. Promote vanpooling, carpooling, and improved public transportation."). Several policies in other chapters explicitly address air quality as well. A policy statement

in the "General Goals and Policies" chapter, for example, reads: "Restore and protect air quality through the control of industrial and vehicular emissions, improved land use management, energy conservation and transportation planning." Additional policies focus on relationships between land use, transportation, and air quality (e.g., "Promote jobs within commuting range of urban residential areas in order to reduce commuting time, save energy, reduce air pollution and improve public convenience.")

Orange County, California (The General Plan is not available on the Web. The Department of Planning and Development Services Web site address is: http://pdsd.oc.ca.gov/)

All 32 cities in Orange County have general plans that address their individual jurisdictions. While the Orange County General Plan primarily focuses on the unincorporated area - territory that is not located within a city - the plan also addresses regional services and facilities provided by the County such as regional parks, roads, flood control facilities, etc.

The Orange County General Plan consists of an introductory chapter, a demographics chapter, and nine elements: Land Use, Transportation, Public Services and Facilities, Resources, Recreation, Noise, Safety, Housing, and Growth Management. These chapters satisfy the seven required sections and include two optional chapters (Public Services and Facilities and Growth Management). The Resources element includes six components: Natural Resources, Energy Resources, Water Resources, Air Resources, Open Space, and Cultural-Historical. Each component has a list of goals, objectives, and policies.

The Energy Resources component does not address air quality directly, but includes measures regarding conservation, transportation, and land use to manage energy resources that also serve to reduce air pollution.

The Air Resources component includes a large amount of background information on the air quality situation in the South Coast Air Basin, of which the County is a part. Overarching air quality management planning resides with the South Coast Air Quality Management District (SCAQMD). The Air Resources component of the County General Plan has a single goal ("Promote optimum sustainable environmental quality standards for air resources") with one objective ("To the extent feasible, attainment of federal and state air quality standards by the year 2007) and one policy ("To develop and support programs which improve air quality or reduce air pollutant emissions"). These statements are followed by a set of 15 implementation actions, all of which have been selected from and keyed to measures from the SCAQMD Air Quality Management Plan. Each measure proposes a set of actions designed to cause a reduction in emissions. The measures are intended to be as explicit as possible. In many cases, multiple options are outlined for implementation of the action.

The Land Use component of Orange County's General Plan contains 13 "Major Land Use Element Policies," including the following:

- A "Balanced Land Use" policy that supports a balance of residential, industrial, commercial, and public uses in communities throughout the County, "reducing the impacts on the County's transportation system and positively affecting air quality;"
- An "Enhancement of the Environment" policy that recognizes the need to enhance a broad range of environmental conditions, including air quality; and
- A "Hazardous Waste Management Facilities" policy that recognizes air quality protection as a siting criterion.

The Transportation component of the General Plan includes a goal and related objectives and policies recommending the implementation of transportation demand management and transportation systems management strategies that support air quality protection efforts, including facilities supportive of multimodal and nonmotorized transportation. Of particular note is an objective recommending that developers of "more than 100 dwelling units, or 25,000 square feet of non-residential uses" be required to: "a) demonstrate consistency between the local transportation facilities, services, and programs, and the regional transportation plan; and b) submit, as part of the development proposal (non-residential), a Transportation System Management/Transportation Demand Management (TSM/TDM) plan . . ." Also of note is a policy recommending that "employment centers (shopping malls, business parks, etc.) with total employment of more than 100 to form Transportation Management Associations (TMA), or be affiliated with an established TMA, to coordinate ridesharing for the purpose of reducing single-occupant vehicle trips to their site." The Plan also references a County Transportation Demand Management Ordinance that imposes requirements on County businesses.

Riverside County, California (http://www.rcip.org/general_plan_toc.html)

Riverside County's General Plan contains eight "elements": Land Use, Circulation, Multi-purpose Open Space, Safety, Noise, Housing, Air Quality, and Administration, followed by two volumes of "area plans" for 19 areas, plus technical appendices. This Plan is undergoing a comprehensive review as part of the "Riverside County Integrated Project," in which the County intends to achieve strong coordination between its conservation, traffic, and land use plans.

A draft revision of the General Plan contains the following five statements within the "Vision Statement" for the County:

- "1. Air quality is viewed as such an important factor in quality of life that its measurements are used as a major factor in evaluating the Plan's performance.
- 2. Riverside County is an active participant in programs to base air quality improvement techniques on "best available science" methods.

- 3. Implementing strategies have been accomplished to transition public and private fleets from petroleum-based fuels to alternative fuels and Riverside County is known as a center for applied new technology.
- 4. The County actively participates with other regional jurisdictions in implementing strategies to reduce air pollution spillover into Riverside County from adjacent counties as well as limiting pollutants generated within the County. This participation has led to measures that contributed to exceeding attainment goals established by the South Coast Air Quality Management District.
- 5. Land use strategies being implemented in the County reflect an improved balance of jobs and housing, resulting in significant reduction in the average commute times and related motor vehicle pollutants."

The Air Quality Element of the draft General Plan contains an extensive factual discussion of air quality conditions and issues and sets forth a series of policies related to multi-jurisdictional cooperation, sensitive receptors, mobile pollution sources, stationary pollution sources, and energy efficiency and conservation. In all, the draft Air Quality Element contains 90 policy statements in 17 topical areas. These policy statements address a wide range of issues, including land use measures, site design, regional coordination, and programmatic recommendations. One focus of these policy statements is the creation of jobs in Riverside County as a mechanism to improve air quality by decreasing commuting times and by focusing employment opportunities in "job poor areas" of the County. Land use patterns that promote employment in close proximity to residential development, as well as alternative modes of travel, are also stressed, as are transportation demand management and transportation systems management measures. Other sections of the draft General Plan stress compact and "transit-adaptive" development, optimization of transportation systems, enhanced transit opportunities, and nonmotorized transportation.

A draft Implementation Plan (one of the appendices of the draft General Plan) tabulates planned actions to carry out the numbered policies in the elements of the Plan, with each action listing the policy items it supports. The Air Quality table contains 14 actions ranging from broad strategic directions to more specific prescriptions to target particular causes of air pollution. Implementation actions identified in other sections of the draft Implementation Plan also reference air quality policies. Of particular note are actions supporting Transportation Demand Management efforts and transit-oriented development.

San Bernardino County, California (http://www.co.san-bernardino.ca.us/landuseservices/General_Plan/Default.asp)

San Bernardino County's General Plan is divided into four Sections, with twenty "Planning Issues" addressed in Section II. Each Planning Issue has a short introduction explaining some background of the issue, followed by a series of numbered goals. Under each goal is one or more numbered policies, supported by one or more actions, varying

from broad, conceptual directions to fairly specific implementation actions. The Planning Issue of Air Quality is under the major issue of Natural Resources. The Air Quality Planning Issue includes 30 policies under six goals. These goals and policies support a broad range of efforts and approaches, including the following: the use of incentives, regulations, and/or Transportation Demand Management efforts to eliminate vehicle trips and vehicle miles travelled (e.g., requiring employee rideshare, transit incentives, work schedule flexibility programs, and telework programs from employers); establishment of congestion fees (perhaps on a pilot basis); increased transit opportunities; increased nonmotorized transportation opportunities; managed parking supply; phased, balanced growth; mixed use development; transit-oriented development; and energy conservation. Goals and policies in the Land Use Element of the General Plan reinforce many of these statements.

The City of Carson, California

(http://ci.carson.ca.us/citydepartments/DevServ/GenPlan/AQ.htm)

The City of Carson last updated its Comprehensive Plan in the early 1980s, although the adoption of a new update is anticipated by the end of 2003. Chapter 10 of the proposed revision to the Plan, labeled as an optional chapter, focuses entirely on air quality. There is a "Guiding Principle" and five Air Quality goals, as well as a background discussion. Each goal has associated policies and implementation measures. The Guiding Principle reads as follows:

"The City of Carson is committed to improving air quality by: reducing total air emissions, educating the public on pollution control measures, minimizing dust generation, and encouraging the use of best available technology."

The five goals deal with: particulate emissions; state and federal air quality standards; alternate fuel vehicles; community awareness; and industrial emissions. Policy statements are generally focused on City programs; however, there are statements that support: the reduction of congestion on major arterials; the provision of trails; infill development; trip reduction efforts; and mitigation of air quality impacts associated with development projects, to the greatest extent possible.

The "Guiding Principle" of the Land Use Element of the proposed Plan (Chapter 2) promotes "integrated, walkable, and mixed use neighborhoods" and brownfield redevelopment. The 16 goals that follow, as well as policies related to these goals, promote brownfield and other redevelopment as well as pedestrian and transit-oriented mixed use development.

The City of Palm Desert, California

(http://www.cityofpalmdesert.com/P_GeneralPlan.asp)

Palm Desert is located within the Salton Sea Air Basin, which is regulated by the South Coast Air Quality Management District. The City is currently updating its General Plan.

The proposed General Plan contains a detailed Air Quality Element within the Environmental Resources Chapter. This Element describes the regulatory environment, various pollutants of concern, state and federal air quality standards, climatic conditions, and air quality monitoring programs. Within these sections, there is information on current air quality programs of the City, including purchasing compressed natural gas (CNG) and electric vehicles for the City's fleet. Finally, the Plan contains an Air Quality goal, and related policies and programs.

The City of Palm Desert's Air Quality goal is "Preservation and enhancement of local and regional air quality for the protection of the health and welfare of the community." Six associated policies cover functional areas including: review of development proposals, the monitoring of air quality, the creation of a diversified transportation system, and the encouragement of alternative energy sources for all uses. As is the case with other plans from California localities that have been reviewed in this document, Policy and Program statements in Palm Desert's draft General Plan focus on City programs. Program statements do, however, support: air quality mitigation efforts for development projects with the potential to generate significant levels of air pollutants (e.g., manufacturing facilities; dust generation from site development); transportation management programs operated by employers; an integrated, multi-use trail network; and pedestrian-oriented development.

The Land Use Element of Palm Desert's draft General Plan contains goal, policy, and program statements that support the incorporation of residential uses into mixed-use commercial developments as well as infill development.

The City of Elk Grove, California

(http://www.egplanning.org/generalplan/background_report/chapter_2_air_quality.pdf)

Elk Grove, California is within the Sacramento Metropolitan Air Quality Management District in northern California. Elk Grove's proposed General Plan (anticipated to be adopted by the end of 2003) contains a chapter entitled "Conservation and Air Quality," which contains six Air Quality policies and several related action steps. These policies cover city operations and facilities, development approvals, transit, and regional air quality programs. While much of this policy guidance is oriented toward City programs, this guidance does promote, in a broader sense: energy conservation; transportation demand management to reduce single-occupant vehicle use; and mitigation of air quality impacts associated with development proposals. Of particular note is a proposed policy that would require "new development projects which have the potential to result in substantial air quality impacts" to "incorporate design, construction, and/or operational features to result in a reduction in emissions equal to 15 percent compared to an 'unmitigated baseline' project" (a project without any energy conservation, trip reduction, or other pollution reduction measures). A related action would establish "Emission Reduction Measures" that could be applied to demonstrate compliance with the 15 percent reduction requirement.

CHAPTER 103.

Air Pollution Control¹

Article 1. General Provisions.

- Sec. 103-1-1. Short title.
- Sec. 103-1-2. Declaration of policy.
- Sec. 103-1-3. Antidegradation policy.
- Sec. 103-1-4. Policy of severability of State and local regulations.
- Sec. 103-1-5. Definitions.

- Sec. 103-2-2. Powers of the Director.

Article 3. Regulations.

- Sec. 103-3-1. General emission standards for all sources.
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- Sec. 103-3-3. Particulate emission from existing fuel-burning equipment.
- Sec. 103-3-4. Particulate emissions from new fuel-burning equipment above and below two hundred fifty million
- BTU per hour capacity.
- Sec. 103-3-5. Particulate matter (other than from fuel-burning equipment and incinerators).
- Sec. 103-3-6. Gaseous contaminants.
- Sec. 103-3-7. Odor.
- Sec. 103-3-8. Incinerators.
- Sec. 103-3-9. Motor vehicle emissions.4
- Sec. 103-3-10. Mobile sources.
- Sec. 103-3-11. Open burning.
- Sec. 103-3-12. Air pollution episode system.
- Sec. 103-3-13. Operation of equipment.
- Sec. 103-3-14. Registration; permits for new sources and modifications; compliance with State and Federal standards; monitoring records generally.
- Sec. 103-3-15. Inspections.
- Sec. 103-3-16. Enforcement procedures of Director.
- Sec. 103-3-17. Emergency procedures.

Article 4. Air Pollution Control Board.

- Sec. 103-4-1. Air Pollution Control Board; established; composition; terms of office; conduct of Board; appeals procedure.
- Sec. 103-4-2. Grant of variances by Board.

Article 5. Records, Fees, Figures 1 through 4 and Penalty.

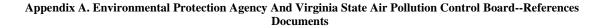
- Sec. 103-5-1. Confidentiality of records.
- Sec. 103-5-2. Fees.
- Sec. 103-5-7. Penalties.
- Sec. 103-5-8. Restraining violations of Chapter.

Article 6. Air Quality Standards for Pollutants.

- Sec. 103-6-1. Ambient air quality standards.
- Sec. 103-6-2. Particulate matter.
- Sec. 103-6-3. Sulfur oxides (sulfur dioxide).
- Sec. 103-6-4. Carbon monoxide.
- Sec. 103-6-5. Photochemical oxidants.
- Sec. 103-6-6. Hydrocarbons.
- Sec. 103-6-7. Nitrogen dioxide.

Article 7. New Stationary Sources and Hazardous Pollutant Standards.

Sec. 103-7-1. General:new source performance standards.



1. As to health generally, see Part 3 of this Code.

ARTICLE 1.

General Provisions.

Section 103-1-1. Short title.

This Chapter shall be known and may be cited as the "County of Fairfax Air Pollution Control Chapter."

(12-13-67; 1961 Code, § 1A-1; 20-73-1A; 27-78-103.)

Section 103-1-2. Declaration of policy.

It is declared to be the public policy of the County in cooperation with Federal, State, and regional agencies, to achieve and maintain such levels of air quality as will protect human health, welfare and safety and to the greatest degree practicable, prevent injury to plant and animal life and property, will foster the comfort and convenience of its people and their enjoyment of life and property, and will promote the economic and social development of the County and facilitate the enjoyment of its attractions. (1961 Code, § 1A-2; 20-73-1A; 27-78-103.)

Section 103-1-3. Antidegradation policy.

None of the provisions of this Chapter shall be construed to authorize or direct any action which shall result in substantial degradation of present air quality in portion of Fairfax County.

(7-28-71; 1961 Code, § 1A-2.1; 20-73-1A; 27-78-103.)

Section 103-1-4. Policy of severability of State and local regulations.

These regulations shall be construed as complementary to each other and such other regulations as deemed necessary by the local or State jurisdictions. Should circumstances or provisions in either local or State regulations be held to be invalid, then the remaining provisions shall apply in the County until legislation corrections can be made.

(1961 Code, § 1A-2.2; 20-73-1A; 27-78-103.)

Section 103-1-5. Definitions.

- (a) For the purposes of this Chapter, the following words and phrases shall have the meanings respectively ascribed to them by this Section:
 - (1) Air contaminant shall mean air pollutant.
 - (2) Air pollution shall mean the presence in the outdoor atmosphere of one or more substances which are or may be harmful or injurious to human health, welfare or safety, to animal or plant life, or to property, or which interfere with the enjoyment of people or property.
 - (3) Air pollution episode shall mean a situation which is declared by responsible authorities as set forth in Section 103-3-12 when weather and/or air pollution conditions indicate a potential threat to human health.
 - (4) Air Pollution Control Officer shall mean the agent or official of the County of Fairfax designated by the governing body of the County to enforce the Air Pollution Control Ordinance within Fairfax County.
 - (5) Air quality shall mean the specific measurement in the ambient air of a particular air contaminant at any given time.
 - (6) Ambient air shall mean that portion of the atmosphere external to buildings, to which the general public has access.
 - (7) Ambient air quality standard--Primary shall mean air quality which is requisite to protect the public health from any known or anticipated adverse effects associated with the presence of contaminants in the ambient air.
 - (8) Ambient air quality--Secondary shall mean air quality which is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of air contaminants in the ambient air.
 - (9) Bacharach Scale shall mean a graduated scale of shades of gray ranging from 0 through 10, with 0 being white and 10 being dense black, developed by the Bacharach Industrial Company and used to evaluate particulate matter in gas samples.
 - (10) *Board* shall mean the Fairfax County Air Pollution Control Board.
 - (11) Capital expenditure shall mean an expenditure for a physical or operational change to a facility which exceeds the product of the applicable "annual asset guideline repair allowance percentage" specified in the latest edition of Internal Revenue Service Publication 534 and the affected facility's basis, as defined by Section 1012 of the Internal

Revenue Code.

- (12) Combustion installation shall mean a source consisting of any furnace, oven, kiln, incinerator, fuel-burning equipment, or any other temporary or stationary equipment in which solid, liquid, or gaseous materials are burned.
- (13) Commence shall mean to undertake or to enter into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of on-site construction or modification including site clearance, grading, dredging or land filling specifically designed for a source in preparation for construction or modification of the source. For the purpose of this definition, interruptions resulting from acts of God, strikes, litigation or other matters beyond the control of the owner shall be disregarded in determining whether a construction or modification program is continuous.
- (14) *Construction* shall mean fabrication or installation of a source.
- (15) *Contaminant* shall mean smoke, dust, soot, grime, carbon or any other particulate matter, radioactive matter, noxious gas, acids, fumes, odor, vapor or any combination thereof.
- (16) *Control equipment* shall mean any equipment which has the function of controlling the emissions from any process and thus reducing the emission of air contaminants to the atmosphere.
- (17) Control program shall mean control program submitted to the State Air Pollution Control Board and local Director, upon the request of either, by the owner of an existing and/or proposed new source, to establish pollution abatement goals and time schedules to achieve such goals, so as to insure compliance by the owner with standards, policies, and regulations of both the local and State air pollution control agencies.
- (18) *Department* shall mean the Fairfax County Health Department.
- (19) *Director* shall mean the Director of the Fairfax County Health Department or his duly authorized agent.
- (20) *Division* shall mean the Air Pollution Control Division of the Fairfax County Health Department.

- (21) *Dust* shall mean solid particles projected into the air by natural forces such as wind, volcanic eruption, or earthquake, and by mechanical or manmade processes such as crushing, grinding, milling, chilling, demolition, shoveling, conveying, screening, bagging, and sweeping.
- (22) Effluent water separator shall mean any source consisting of any tank, box, sump, or other container in which any volatile organic compound floating or entrained or contained in water entering such tank, box, or sump or other container is physically separated and removed from such water prior to outfall, drainage, or recovery of such water.
- (23) Existing source shall mean any stationary source other than a new source or modified source.
- (24) *Fixed capital cost* shall mean the capital needed to provide all the depreciable components.
- (25) Fuel burning equipment shall mean a source consisting of any furnace, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.
- (26) Fugitive dust shall mean solid air-borne particulate matter of dust emitted from any source other than a flue or stack.
- (27) Furnace shall mean an enclosed space provided for combustion.
- (28) Gasoline shall mean any petroleum distillate having a Reid vapor pressure in the range of four (4) to fifteen (15) pounds at one hundred (100) degrees Fahrenheit.
- (29) Gases shall mean formless fluids which, under standard conditions, occupy the space of enclosure and which can be changed to the liquid or solid state only by the combined effect of increased pressure and decreased temperature.
- (30) *Hazardous air contaminant* shall mean an air contaminant to which no ambient air quality standard is applicable and which may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.
- (31) *Heat input* shall mean the total gross heating value of all fuels burned.
- (32) *Heating value* shall mean the heat released by combustion of one (1) pound of fuel or other material measured in British Thermal Units (BTU) on an as-received basis.

- (33) *Incinerator* shall mean any source consisting of a furnace, and all appurtenances thereto, designed for the destruction of refuse by burning. "Open burning" is not considered incineration. For purposes of these rules, the destruction of any combustible liquid or gaseous material by burning in a flare or flare stack shall be considered incineration.
- (34) Land clearing wastes shall mean wood, trees, tree trimmings, brush or other vegetable matter indigenous to the site which is rendered as waste as a result of land clearing operations.
- (35) *Malfunction* shall mean sudden failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner.
- (36) *Mist* shall mean a state of atmospheric obscurity produced by suspended liquid droplets.
- (37) *Mobile source* shall mean any portable or self-propelled machinery or equipment, including but not limited to automobiles, tractors, trucks, cranes, or other landcraft; compressors, generators or other gasoline or diesel powered equipment or any aircraft, locomotive, bus, ship, rail vehicle or watercraft which emits or may emit any air contaminant.
- (38) *Modification* shall mean any physical change in, or change in the method of operation of a facility which increases the amount of any air contaminant emitted into the atmosphere by that facility or which results in the emission of any air contaminant into the atmosphere not previously emitted, except that the following shall not, by themselves, be considered modifications under this definition:
 - (A) Maintenance, repair and replacement which the Director determines to be routine for a source type.
 - (B) An increase in production rate of a facility, if that increase can be accomplished without a major capital expenditure on the stationary source containing that facility.
 - (C) An increase in the hours of operation.
 - (D) Use of an alternative fuel or raw material if, prior to the date any provision of these regulations becomes applicable to that source type, the facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if provisions for that use were included in the final construction specifications.

- (E) The addition or use of any system or device whose primary function is the reduction of air contaminants, except when a emission control system is removed or is replaced by a system which the Director considers to be less efficient.
- (F) The change in ownership of a facility.
- (39) *Modified source* shall mean any stationary source, the modification of which is commenced on or after the effective date of applicable provisions of this Ordinance.
- (40) *Motor vehicle* shall mean any powered conveyance normally licensed by the Virginia Division of Motor Vehicles.
- (41) New source shall mean any stationary source the construction or reconstruction of which is commenced on or after the effective date of applicable provisions of these regulations; any source relocated on or after the effective date of applicable provisions of these regulations.
- (42) *Odor* shall mean the sensation resulting from stimulation of the human sense of smell.
- (43) *Opacity* shall mean the degree to which emissions reduce the transmission of light and obscure the view of an object in the background, expressed as a percentage.
- (44) *Open burning* shall mean the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the ambient air without passing through a stack, duct, or chimney.
- (45) *Owner* shall mean any person, including bodies politic and corporate, associations, partnerships, personal representatives, trustees and committees, as well as individuals, who owns, leases, operates, controls or supervises a source.
- (46) *Particulate matter* shall mean any finely divided solid or liquid material, other than uncombined water, as measured by the applicable E.P.A. test or sampling method.
- (47) *Person* as used in these regulations, shall have no connotation other than that customarily assigned to the term "person", but shall include bodies politic and corporate, associations, partnerships, personal representative, trustees and committees, as well as individuals.
- (48) *Process unit* shall mean any step in a manufacturing operation which results in the emission of contaminants to the atmosphere.

- (49) Process weight shall mean total weight of all materials introduced into any source process unit which may cause any emissions of contaminants. Process weight includes solid fuels charged, but does not include liquid and gaseous fuels charged or combustion air for all fuels.
- (50) Rated capacity shall mean the capacity as stipulated in the purchase contract for the condition of one hundred (100) percent load, or such other capacities as mutually agreed to by the Director and owner.
- (51) *Reconstruction* shall mean the replacement of components or a facility to such an extent that:
 - (A) The fixed capital cost of the new components exceeds fifty (50) percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
 - (B) It is technologically and economically feasible to meet the applicable emission standards prescribed under this ordinance.
- (52) Refuse shall mean and include garbage, rubbish and trade wastes.
 - (A) *Garbage* shall mean animal and vegetable matter such as that originating in houses, kitchens, restaurants and hotels, produce markets, food service or processing establishments, greenhouses, and hospitals, clinics or veterinary facilities.
 - (B) Rubbish shall mean solids not considered to be highly flammable or explosive such as, but not limited to, rags, old clothes, leather, rubber, carpets, wood, excelsior, paper, ashes, tree branches, yard trimmings, furniture, metal food containers, glass, crockery, masonry, and other similar materials.
 - (C) *Trade waste* shall mean all solid or liquid material resulting from construction, building operations, or the prosecution of any business, trade or industry such as, but not limited to, plastic products, cinders and other forms of solid or liquid waste materials.
- (53) Ringelmann Smoke Chart shall mean a chart for grading the appearance, density, or shade of smoke as published, with instructions for use, by the U.S. Bureau of Mines in information Circular 8333, dated May 1967. Any other method for grading smoke which is approved by the Director as the equivalent of the Ringelmann Chart may be substituted therefor.

- (54) Salvage operations shall mean any source consisting of any business, trade or industry engaged in whole or in part in salvaging or reclaiming any product or material, such as, but not limited to, reprocessing of used motor oils, metals, chemicals, shipping containers, or drums, and specifically including automobile graveyards and junkyards as defined in Section 33.1-348 of the Va. Code Ann.
- (55) *Smoke* shall mean any and all sources of emission of air contaminants, whether privately or publicly owned or operated or person contributing to emission of air contaminants. Without limiting the generality of the foregoing, this term includes all types of business, commercial and industrial plants, works, shops and stores, and heating and power plants or stations, buildings and other structures of all types.
- (56) Source shall mean any and all sources of emission of air contaminants, whether privately or publicly owned or operated or person contributing to emission of air contaminants. Without limiting the generality of the foregoing, this term includes all types of business, commercial and industrial plants, works, shops and stores, and heating and power plants or stations, buildings and other structures of all types.
- (57) *Stack* or *chimney* shall mean any flue, conduit, or duct arranged to conduct emissions into the atmosphere.
- (58) Standard conditions shall mean a temperature of twenty (20) degrees Celsius (68°F) and a pressure of seven hundred sixty (760) mm of Hg (29.92 in. of Hg).
- (59) Standard of performance shall mean degree of air contaminant emission limitation achievable through the application of the best system of emission reduction which the Director determines has been adequately demonstrated.
- (60) *Stationary source* shall mean any building, structure, facility, or installation which emits or may emit any air contaminant.
- (61) Submerged fill pipe shall mean any fill pipe the discharge opening of which is entirely submerged when the liquid level is six (6) inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean that the fill pipe is adequately covered at all times during normal working of the tank.
- (62) Total capacity shall mean the sum of the rated capacities of all existing, new and modified indirect heating furnaces which must be operated simultaneously under the conditions of maximum load at a facility, expressed as heat input.

(63) Volatile Organic Compound shall mean any organic compound which has a vapor pressure of one and five-tenths (1.5) pounds per square inch absolute or greater under actual storage conditions, or, in the case of loading or processing, under actual loading or processing conditions. (Kerosene and fuel oil used for household heating have vapor pressures of less than one and five-tenths (1.5) pounds per square inch absolute under standard conditions; therefore, kerosene and fuel oil are not considered volatile organic compounds.)

(1961 Code, § 1A-3; 20-73-1A; 27-78-103.)

ARTICLE 2.

Air Pollution Control Division.

Section 103-2-1. Air Pollution Control Division;² created.

2. As to authority of County relating to air pollution, see Va. Code Ann., \S 10-17.83.

There is hereby created a Division of Air Pollution Control in the County Health Department.

(12-13-67; 1961 Code, § 1A-2.3; 20-73-1A; 27-78-103.)

Section 103-2-2. Powers of the Director.

- (a) The Director shall have the power, in cooperation with the State Air Pollution Control Board, to develop a comprehensive program for the study, abatement and control of all sources of air pollution in the County; advise, consult and cooperate with the State, and all agencies of the County, political subdivisions, private industry and other affected groups in furtherance of the purpose of the law.
 - (b) In addition to any other powers vested in him by law, the Director shall:
 - (1) Conduct studies, investigations and research relating to air pollution and its prevention, abatement and control.
 - (2) Issue such orders as may be necessary to effectuate the purposes of this Chapter and enforce the same by all appropriate administrative and judicial proceedings.
 - (3) Hold hearings relating to any aspect of or matter in the administration of the Chapter.

- (4) Secure necessary scientific, technical, administrative and operational services, including laboratory facilities, by contract or otherwise.
- (5) Prepare and develop a comprehensive plan or plans for the prevention, abatement and control of air pollution.
- (6) Advise, consult and cooperate with other local governmental units, agencies of the State, industries, interstate or interlocal agencies and the Federal government, and with interested persons or groups.
- (7) Review those matters having a bearing upon air pollution referred by other agencies (such as planning, zoning, building, and fire departments) and make reports, including recommendations, to the referring agencies with respect thereto.
- (8) Collect and disseminate information and conduct educational and training programs relating to air pollution.

(1961 Code, § 1A-2.4; 20-73-1A; 27-78-103.)

ARTICLE 3.

Regulations.

Section 103-3-1. General emission standards for all sources.

- (a) *Emission standards*.
- (1) No owner or other person shall cause, suffer, allow or permit the discharge into the outdoor atmosphere from any source visible emissions of greater than twenty (20) percent opacity.
- (2) No owner or other person shall cause, suffer, allow or permit the discharge of dust, fumes, gases, mist, vapors or any combination thereof from a building or equipment in such a manner and amount as to cause a nuisance or violate these regulations.
- (b) *Exceptions*.
- (1) When starting a new fire or blowing tubes or cleaning a fire box, an owner may discharge into the atmosphere from any source visible emissions of greater than twenty (20) percent opacity for brief periods.
- (2) The limits of Section 103-3-1 shall not apply when the opacity of the visible emission is due to the presence of uncombined water.

(c) *Traffic hazard.* No owner or other person shall discharge from any source whatsoever such quantities of emissions as may cause a traffic hazard. (27-78-103.)

Section 103-3-2. Smoke or other visible emissions; stationary sources.³

3. As to authority of County to regulate fuel-burning equipment and emission of smoke, see Va. Code Ann., § 15.1-510.4.

(a) Prohibition of smoke or other visible emissions. No owner shall cause, suffer, allow or permit the discharge into the outdoor atmosphere from any single point of emission from a source any air pollutant which is:

- (1) Darker in shade than smoke designated as No. 1 on the Ringelmann Smoke Chart, or
- (2) Of such opacity as to obscure an observer's view to a degree greater than does smoke designated as No. 1 on the Ringelmann Smoke Chart (when used as a measure of opacity).
- (b) *Exceptions*.
- (1) When starting a new fire or blowing tubes or cleaning a fire box, a person may discharge into the atmosphere from any single point of emission, emissions of a shade or density not darker than No. 3 on the Ringelmann Chart or 60 percent opacity for brief periods (not to exceed six (6) minutes in any sixty (60) minute period).
- (2) The limits of Subsection (a) above shall not apply when the opacity of the visible emission is due to the presence of uncombined water.
- (c) *Traffic hazard.* No person shall discharge from any source whatsoever such quantities of air contaminants, uncombined water, or other materials which may cause a traffic hazard.

(1961 Code, § 1A-4; 20-73-1A; 27-78-103.)

Section 103-3-3. Particulate emission from existing fuel-burning equipment.

- (a) Emissions prohibited for furnaces.
- (1) No owner shall allow to be emitted into the outdoor atmosphere from any fuel-burning equipment or to pass a convenient measuring point near the stack outlet, particulate matter in the flue gases to exceed the appropriate following standard:

- (A) For facilities with total capacity less than 87 million (87×10^4) BTU per hour, the maximum allowable emission weight shall be 0.3 pounds per particulate per million BTU input.
- (B) For facilities with total capacity between 87 million (87×10^6) and 10 billion (10×10^9) BTU per hour, the maximum allowable emission ratio in pounds per million BTU input, E, shall be determined by the following equation:E = $0.8425 \times \text{H}^{-0.2314}$ where H is the total heat input in millions of BTU per hour.
- (C) For facilities with total capacity in excess of 10 billion (10×10^9) BTU per hour, the maximum allowable emission weight shall be ten-hundredths (0.10) pound of particulate per million BTU input.
- (D) Figure 1, Section 103-5-3; illustrates the above emissions allowed.
- (2) The maximum allowable particulate emissions for a facility shall be the product of the total capacity and the emission rate. The emission contribution of each unit shall be determined using procedures acceptable to the director based on the rule(s) and such other conditions as may be stipulated in the control program or set forth in the registration forms for the facility.
- (b) Emission testing. Emission tests relating to this Chapter shall be made by generally recognized standards or methods of measurement. Methods of measurement and testing can be found in Appendix A of Title 40 Code of Federal Regulations Part 60, but these may be adjusted or changed by the Director to suit specific sampling conditions or needs based upon good practice, judgment and experience. When such tests are adjusted, consideration shall be given to the effect of such changed on established emission standards. For the purpose of emission testing, the particulate emission for each of the fuel-burning equipment units of the facility shall be its contribution to the total allowable emission from the facility when operating at total capacity. When it is not possible to satisfactorily perform emission tests at the rated capacity of an individual fuel-burning equipment unit or jointly on all units in operation, the measurements taken at actual operating load shall be related to the allowable emission at rated capacity for the unit(s) being tested, adjusted for any changes in emission control equipment efficiency due to variations in load from rated capacity.
- (c) *Exemptions*. All fuel-burning equipment for space heating with a BTU input of less than three hundred fifty thousand (350,000) BTU per hour shall be exempt from this rule.
- (d) *Bacharach standard*. No owner shall cause or allow to be emitted into the outdoor atmosphere from any fuel-burning equipment or to pass a convenient measuring point near the breeching, smoke which exceeds Number 3 on the Bacharach Scale or the equivalent.

Section 103-3-4. Particulate emissions from new fuel-burning equipment above and below two hundred fifty million BTU per hour capacity.

- (a) From a fuel-burning facility constructed after the effective date of this Chapter, no owner shall cause or permit the discharge into the atmosphere of particulate matter in excess of one-tenth (0.1) pound per million BTU heat input, maximum two-hour average for facilities larger than 250 million BTU capacity per hour.
- (b) For facilities with a total capacity between $350,000~(3.5\times10^5)$ and 250 million (250×10^6) BTU per hour, the maximum allowable emission in pounds per million BTU input, E, shall be determined by the following equation: $E = 0.252 \times H^{-0.1671}$, where H is the total heat input in millions of BTU per hour.
- (c) Figure 2, Section 103-5-4, illustrates the above emission standards. (1961 Code, § 1A-6; 20-73-1A; 27-78-103.)

Section 103-3-5. Particulate matter (other than from fuel-burning equipment and incinerators).

- (a) The maximum allowable emission of particulate matter from any source whatever except fuel-burning equipment and incinerators shall be determined from Figure 3, Section 103-5-5. Where the process weight (moisture free basis) per hour falls between two values in the figure, the maximum weight discharged per hour shall be determined by linear interpolation. Where the process weight is in excess of sixty thousand (60,000) pounds per hour, there shall not be discharged in any one hour from any source whatsoever particulate matter in excess of forty (40) pounds per hour.
 - (1) Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this rule, the interpretation that results in the minimum value for allowable emission shall apply.
 - (2) For purposes of this rule, the total process weight rate for each individual process unit at a plant or premises shall be used for determining the maximum allowable emission rate of particulate matter that passes through a stack or stacks.
- (b) Control of fugitive particulate matter (fugitive dust). No person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne or to create a nuisance. Such reasonable precautions may include, but are not limited to, the following:

- (1) Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
- (2) Application of asphalt, oil, water or suitable chemicals on dirt roads, materials, stockpiles, and other surfaces which can create airborne dusts.
- (3) Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials. The use of dry sandblasting shall be limited to the interior of industrial buildings where adequate controls are available to contain the resulting dust. Wet sandblasting or its equivalent is permissible in all other areas of the County.
- (4) Open equipment for conveying or transporting materials likely to become airborne shall be covered, or treated in an equally effective manner at all times when in motion.
- (5) The paving of roadways and their maintenance in a clean condition.
- (6) The prompt removal of earth or other material from paved streets over which such earth or other material has been transported by trucking or earth-moving equipment or erosion by water.

(1961 Code, § 1A-7; 20-73-1A; 27-78-103.)

Section 103-3-6. Gaseous contaminants.

- (a) Prohibition of gaseous contaminant emissions. No owner shall allow the operation of a combustion installation and/or process equipment so as to disperse into the outdoor atmosphere gaseous contaminant emissions in such quantities or concentrations as to injure human, plant or animal life, or cause a condition of air pollution or create a nuisance.
 - (b) Sulfur-containing gases and compounds.
 - (1) Control of the emission of sulfur dioxide from fuel-burning installations.
 - (A) No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide caused by the combustion of fuel from all combustion installations at any location in excess of the quantity shown by Curve A, Figure 4, Section 103-5-6.
 - (B) If necessary to achieve and maintain the ambient air quality standards, the Director may require compliance with emission standards shown by Curve B, Figure 4, Section 103-5-6.

- (2) Sulfur oxides from burning of fuel. No owner shall burn, sell or make available for sale any fuel the sulfur content of which exceeds one (1) percent by weight.
- (c) *Control of hydrocarbon emissions from stationary sources.*
- (1) Storage of volatile organic compounds. No owner or other person shall place, store, or hold in any stationary tank, reservoir or other container of more than forty thousand (40,000) gallons capacity any volatile organic compound, unless such tank, reservoir or other container is a pressure tank maintaining working pressure sufficient at all times to prevent vapor or gas loss to the atmosphere, or is designed and equipped with one of the following vapor loss control devices, properly installed, in good working order and in operation.
 - (A) A floating roof, consisting of a pontoon type or double-deck type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment provided for in this paragraph shall not be used if the volatile organic compound has vapor pressure greater than eleven and one tenth (11.1) pounds per square inch absolute under actual average storage conditions. All tank gauging and sampling devices shall be gastight except when gauging or sampling is taking place.
 - (B) A vapor recovery or vapor loss control system, which reduces the emission of organic compounds into the atmosphere by at least ninety (90) percent by weight. All tank gauging and sampling devices shall be gastight except when gauging or sampling is taking place.
 - (C) Other equipment of equal efficiency, provided such equipment is approved by the Director.
- (2) Bulk loading of volatile organic compounds.
 - (A) No owner or other person shall load volatile organic compounds into any tank truck, trailer or railroad tank car from any loading facility unless the loading facility is equipped with a vapor collection and disposal system or its equivalent approved by the Director.

- (B) Loading shall be accomplished in such a manner that all displaced vapor and air will be vented only to the vapor collection system. Measures shall be taken to prevent liquid drainage from the loading device when it is not in use or to accomplish substantially complete drainage before the loading device is disconnected.
- (C) The vapor disposal portion of the vapor collection and disposal system shall consist of one of the following:
 - (i) An absorber system or condensation system which processes all vapors and recovers at least ninety (90) percent by weight of the vapors and gases from the equipment being controlled.
 - (ii) A vapor-handling system which directs all vapors to a fuel gas system.
 - (iii) Any system of an efficiency equal to or greater than (2)(C)(i) or (ii) of this Section if approved by the Director.
- (D) Paragraph (c)(2)(A) of this Section shall apply only to the loading of volatile organic compounds at loading facilities from which twenty thousand (20,000) gallons or more of such compounds are loaded per working day, based on a twelve-month average.
- (3) Gasoline transfer vapor control.
 - (A) No owner or other person shall transfer gasoline from any delivery vessel into any stationary storage container with a capacity greater than two thousand (2,000) gallons unless such container is equipped with a submerged fill pipe and unless the displaced vapors from the storage container are processed by a system that prevents release to the atmosphere of no less than ninety (90) percent by weight of organic compounds in said vapors displaced from the stationary container location. The vapor recovery portion of the system shall include one or both of the following:
 - (i) A vaportight vapor return line from the storage container to the delivery vessel which shall be connected before gasoline is transferred into the container.
 - (ii) An absorption system or condensation system or the equivalent which processes and recovers not less than ninety (90) percent by weight of organic compounds in the displaced vapor.

- (B) The vapor-laden delivery vessel may be refilled only at facilities equipped for ninety (90) percent vapor recovery in accordance with Paragraph (c)(2)(C) of this Section. The delivery vessel shall be so designed and maintained as to be vaportight at all times. For purposes of this subparagraph, vaportight shall mean capable of holding an initial four (4) oz. (6.9 in. H²O) vacuum for five (5) minutes without dropping below two and five tenths (2.5) oz. (4.3 in. H²O).
- (C) The provisions of Paragraphs (c)(3)(A) and (c)(3)(B) of this Section shall not apply to the following:
 - (i) Facilities whose total average gasoline through-put is less than twenty thousand (20,000) gallons per month based on a twelve-month average of bulk receipts.
 - (ii) Stationary storage containers used predominantly for refueling of mobile farm equipment.
 - (iii) Transfer made to storage tanks equipped with floating roofs or their equivalent.
- (D) The provisions of Paragraphs (c)(3)(A) and (c)(3)(B) of this Section shall be effective on March 1, 1976, except that gasoline storage compartments of one thousand (1,000) gallons or less in gasoline delivery vehicles in use on February 3, 1974, will not be required to be retrofitted with a vapor return system until January 1, 1977. Owners claiming exemption from this Section under Paragraph (c)(3/8)(C)(i) of this Section shall submit a record of their monthly bulk receipts to the Director for the twelve-month periods ending December 31, 1975, December 31, 1976, and thereafter if requested.
- (4) Evaporation losses from the filling of vehicular tanks.
 - (A) No owner or other person shall transfer gasoline to an automotive fuel tank from gasoline dispensing systems unless the transfer is made through a fill nozzle designed to:
 - (i) Prevent discharge to the atmosphere of vapors containing organic compounds from either the vehicle filler neck or dispensing nozzle.
 - (ii) Direct vapor displaced from the automotive fuel tank to a system wherein at least ninety (90) percent by weight of the organic compounds in the displaced vapors are recovered.

- (iii) Prevent automotive fuel tank overfills or spillage on fill nozzle disconnect.
- (B) The system referred to in Paragraph (c)(1/2)(A) of this Section may consist of a vaportight vapor return line from the fill nozzle filler neck interface to the dispensing tank or to an adsorption, absorption, incineration, refrigeration-condensation system or the equivalent. Components of the systems required by Paragraph (c)(3) of this Section may be used for compliance with Paragraph (c)(4)(A) of this Section.
- (C) The provisions of Paragraph (c)(4)(A) of this Section shall not apply to the following:
 - (i) Gasoline transfers to pre-1971 model year automobiles or to other vehicles not required to be equipped with fuel evaporative emission control systems under 40 CFR Part 85.
 - (ii) Facilities whose total average gasoline through-put is less than twenty thousand (20,000) gallons per month, based on a twelve-month average of bulk receipts.
- (D) The provisions of Paragraph (c)(4)(A) of this Section shall be effective eighteen (18) months after the Director has approved such systems as described in Paragraph (c)(4)(B) of this Section. Owners claiming exemption from this Section under Paragraph (c)(4)(C)(ii) of this Section shall submit a record of their monthly bulk receipts to the Director for the twelve-month period ending January 31, 1976, and January 31, 1977, and thereafter if requested.
- (5) Submerged fill-storage vessel. No owner or other person shall place, store or hold in any stationary storage vessel of more than two thousand (2,000) gallons capacity, any volatile organic compound unless such vessel is equipped to be filled through a submerged fill pipe or is a pressure tank or is fitted with a system as described in Paragraph (c)(1)(A)(ii) of this Section.
- (6) Pumps and compressors. All pumps and compressors handling volatile organic compounds shall have mechanical seals or other equipment of equal efficiency for purpose of air pollution control as approved by the Director.

- (7) Waste gas disposal.
 - (A) No owner or other person shall emit a photochemically reactive organic compound from any plant producing ethylene for chemical feed stock, or utilizing ethylene as raw material, into the atmosphere in excess of forty (40) pounds per day unless the waste gas stream is properly burned at one thousand three hundred (1,300) degrees Fahrenheit for three-tenths (0.3) second or greater in a direct-flame afterburner or removed by other methods of comparable efficiency.
 - (B) No owner or other person shall emit continuously gases of photochemically reactive volatile organic compounds to the atmosphere in excess of forty (40) pounds per day from a vapor blowdown system unless these gases are burned by smokeless flares, or an equally effective control device as approved by the Director. This Section is not intended to apply to accidental, emergency or other infrequent emissions of these gases, needed for safe operation of equipment and processes.
- (8) Liquid organic compounds.
 - (A) No owner or other person shall discharge more than fifteen (15) pounds of organic compounds into the atmosphere in any one day from any article, machine, equipment or other contrivance in which any liquid organic compound comes into contact with flame or is baked, heat-cured or heat-polymerized, in the presence of oxygen unless such a discharge represents an overall reduction of eighty-five (85) percent or greater.
 - (B) No owner or other person shall discharge more than forty (40) pounds of organic compounds into the atmosphere in any one day from any article, machine, equipment or other contrivance used under conditions other than described in paragraph (c)(8)(A) of this Section, for employing, applying, evaporating or drying any photochemically reactive liquid organic compounds, or material containing such compound, unless all organic compounds discharged from such article, machine, equipment or other contrivance have been reduced by at least eighty-five (85) percent overall. The limitations prescribed in this Paragraph shall not apply to any complying industrial surface coating, which means any paint, lacquer, varnish, ink, adhesive or other surface coating material which emits to the atmosphere organic compounds which are not photochemically reactive. In determining percentages for waterbase paints, the quantity of water shall be in the calculation of percentage.

- (C) Any series of articles, machines, equipment or other contrivances designed for processing a continuously moving sheet, web, strip or wire which is subject to any combination of operations described in Paragraph (c)(8)(A) or (c)(8)(B) of this Section involving any photochemically reactive liquid organic compound or material containing such compound, shall be subject to compliance with Paragraph (c)(8)(B) of this Section. Where only nonphotochemically reactive liquid organic compounds are employed or applied, and where any portion or portions of said series of articles, machines, equipment or other contrivances involving operations described in Paragraph (c)(8)(A) of this Section said portions shall be collectively subject to compliance with Paragraph (c)(8)(A) of this Section.
- (D) Emissions of organic compounds to the atmosphere from the cleanup with photochemically reactive liquid organic compounds of any article, machine, equipment or other contrivances described in Paragraph (c)(8)(A), (c)(8)(B) or (c)(8)(C) of this Section shall be included with the other emissions of organic compounds from that article, machine, equipment or other contrivances for determining compliance with this Section.
- (E) Emissions of organic compounds to the atmosphere as a result of spontaneously continuing the drying of products for the first twelve (12) hours after their removal from any article, machine, equipment or other contrivance described in Paragraph (c)(8)(A), (c)(8)(B) or (c)(8)(C) of this Section shall be included with other emissions of organic compounds from that article, machine, equipment or other contrivance, for determining compliance with this Section.
- (F) Emissions of organic compounds into the atmosphere required to be controlled by Paragraph (c)(8)(A), (c)(8)(B) or (c)(8)(C) of this Section shall be reduced by:
 - (i) Incineration, provided that ninety (90) percent or more of the carbon in the organic compound being incinerated is oxidized to carbon dioxide; or
 - (ii) Absorption; or
 - (iii) Processing in a manner determined by the Director to be not less effective than Paragraph (c)(8)(F)(i) or (ii) of this Section.

- (G) An owner incinerating, adsorbing or otherwise processing organic compounds pursuant to this Section shall provide, properly installed, calibrated, maintained and operated, devices as specified by the Director, for indicating temperature, pressure, rate of flow or other operating conditions necessary to determine the degree and effectiveness of air pollution control methods.
- (H) Any owner using liquid organic compounds or any materials containing liquid organic compounds shall upon request supply the Director in the manner and form prescribed by him, written evidence of the chemical compositions, physical properties and amount consumed for each liquid organic compound used.
- (I) The provision of Paragraph (c)(8) of this Section shall not apply to:
 - (i) The transport or storage of liquid organic compounds or materials containing liquid organic compounds.
 - (ii) The use of equipment for which other requirements are specified by Paragraph (1), (2), (3), (4), (5) or (11) of this Section or which are exempt from air pollution control requirements by said paragraphs.
 - (iii) The spraying or application with other equipment of insecticides, pesticides, or herbicides.
 - (iv) The employment, application, evaporation or drying of saturated halogenated hydrocarbons or perchloroethylene.
 - (v) Development or research laboratory operation involving the use of photochemically reactive liquid organic compounds.
 - (vi) The use of any material, in any article, machine, equipment or other contrivance described in Paragraph (c)(8)(A), (c)(8)(B) or (c)(8)(C) or (c)(8)(D) of this Section if:
 - a. The volatile content of such material consists only of water and liquid organic compounds, and
 - b. The liquid organic compounds comprise not more than twenty (20) percent of said volatile content, and
 - c. The volatile content is not photochemically reactive.

- (J) Notwithstanding the above provisions, after May 31, 1974, no owner or other person shall cause, suffer, allow or permit the use of any photochemically reactive liquid organic compound for the purpose of dry cleaning of clothing or household items.
- (9) Architectural coatings.
 - (A) No owner or other person shall sell or offer for sale in containers exceeding one (1) gallon capacity, any architectural coating containing photochemically reactive organic compound as solvent.
 - (B) No owner or other person shall employ, apply, evaporate or dry any architectural coating, purchased in containers exceeding one (1) gallon capacity, containing photochemically reactive organic compound as solvent.
 - (C) No owner or other person shall thin or dilute any architectural coating with a photochemically reactive organic compound.
- (10) Disposal and evaporation of liquid organic compounds. No owner or other person shall, during any one day, dispose of a total of more than one and one-half (1 1/2) gallons of any photochemically reactive liquid organic compound by any means which will permit the evaporation of such compound into the atmosphere.
- (11) Effluent water separators.
 - (A) No owner or other person shall use any compartment of any single or multiple compartment equipment designed to separate water from gasoline or other photochemically reactive volatile organic compounds which compartment receives effluent water containing two hundred (200) gallons a day or more of gasoline or other photochemically reactive volatile organic compounds from any equipment processing, refining, treating, storing or handling gasoline or other photochemically reactive volatile organic compounds unless such compartment is equipped with one of the following vapor loss control devices except when gauging or sampling is taking place:
 - (i) A solid cover with all openings sealed and totally enclosing the liquid contents of that compartment.
 - (ii) A floating pontoon or double-deck type cover, equipped with closure seals to enclose any space between the cover's edge and compartment wall.

- (iii) A vapor recovery system which reduces the emission of all organic compound gases into the atmosphere by at least ninety (90) percent by weight.
- (iv) Any system of an efficiency equal to or greater than Paragraph (c)(11)(A)(i), (ii) or (iii) of this Section if approved by the Director.
- (B) Paragraph (c)(11)(A) of this section shall not apply to any effluent water separator used exclusively in conjunction with production of crude oil, if the water fraction of the oil-water effluent entering the separator contains less than five (5) parts per million hydrogen sulfide, organic sulfides or a combination thereof.

(27-78-103.)

Section 103-3-7. Odor.

- (a) *Scope*. This Section shall apply to all operations that produce odorous emissions.
- (b) *Prohibition of objectionable odor*. No person shall cause, suffer, allow or permit any source to discharge air contaminants which cause an objectionable odor to individuals of ordinary sensibility without employing adequate measures for the control of odorous emissions, as may be approved by the Director.
 - (c) Determination of violation.
 - (1) Determination of objectionable odor will be made after a thorough review of all data and evidence pertaining to the case has been made by the Director.
 - (2) If desired a person or persons found to be in violation of this Section may, upon notice to the Fairfax County Air Pollution Control Board, apply for an exception to the Director's ruling. The Board's investigation may include the Director's data and evidence, the use of an odor panel, and/or other methods deemed necessary by the Board. The Board, after a public hearing, may uphold or vacate the Director's ruling.
- (d) *Exception*. This Section is not intended to be applied to accidental or other infrequent emissions of odors. (1961 Code, § 1A-9; 20-73-1A; 27-78-103.)

Section 103-3-8. Incinerators.

- (a) Prohibition of smoke, particulates and odor emissions from incinerators. No owner shall cause, suffer, allow or permit the operation of an incinerator so as to discharge into the outdoor atmosphere smoke, particulate, or odor sufficient to cause a condition of air pollution or create a nuisance.
 - (b) Determination of violation.
 - (1) Smoke from incinerators. Smoke emitted into the atmosphere from any incinerator shall not be darker in shade than No. 1 on the Ringlemann Chart; or of such opacity as to obscure an observer's view to a degree greater than does smoke designated as No. 1 on the Ringelmann Chart (when used as a measure of opacity).
 - (2) Odor from incinerators. Incinerators, including all associated equipment and grounds shall be designated, operated and maintained so as to prevent the emissions of objectionable odors.
- (c) Emission standards for existing incinerators. Incinerators shall not discharge particulate matter in excess of fourteen hundredths (0.14) grain per standard cubic foot of dry flue gas corrected to twelve (12) percent carbon dioxide (without the contribution of auxiliary fuel). This emission rate is equivalent to approximately fourteen hundredths (0.14) pound per one hundred (100) pounds of refuse burned.
 - (d) Flue-fed and single-chamber incinerators.
 - (1) Flue-fed incinerators (those which use the same flue for feeding the refuse and discharging the gases of combustion) are prohibited for incineration usage.
 - (2) Single-chamber incinerators (those which do not have a secondary combustion chamber) are prohibited for incineration usage.
 - (e) Emission standards for new incinerators.
 - (1) Incinerators installed after the effective date of this Ordinance shall not discharge particulate matter in excess of eight hundredths (0.08) grain per standard cubic foot of dry flue gas corrected to twelve (12) percent carbon dioxide (without the contribution of auxiliary fuel).
 - (2) All other limitations previously described in this Section shall apply.
- (f) *Emission testing*. Methods of measurement and testing can be found in Appendix A of Title 40 Code of Federal Regulations Part 60.

(g) Sealing of incinerators. Any incinerator, the operation of which is prohibited, must be rendered inoperable in a manner approved by the Director. (1961 Code, § 1A-10; 20-73-1A; 27-78-103.)

Section 103-3-9. Motor vehicle emissions.⁴

- (a) Prohibition of acts affecting emissions from motor vehicles.
- (1) No person shall cause, suffer, allow or permit the removal, disconnection or disabling of a crankcase emission control system or device, exhaust emission control system or device, fuel evaporative emission control system or device, or other air pollution control system or device which has been installed on a motor vehicle in accordance with Federal and State laws and regulations while such motor vehicle is operating in the County of Fairfax, Virginia.
- (2) Nor shall any person defeat the design purpose or any such motor vehicle pollution control system or device by installing therein or thereto any part of component which is not a standard factory replacement part of component of the device.
- (3) Nor shall the motor vehicle or its engine be operated with the motor vehicle pollution control system or device removed or otherwise rendered inoperable.
- (4) The provisions of the foregoing paragraphs shall not prohibit or prevent shop adjustments and/or replacements of equipment for maintenance or repair or the conversion of engines to low-pollution fuels, such as, but not limited to, natural gas or propane.
- (b) Visible emissions from motor vehicles.
- (1) No person shall cause or permit the emission of visible air contaminants from gasoline-powered motor vehicles for longer than five (5) consecutive seconds after the engine has been brought up to operating temperature.
- (2) No person shall cause or permit the emission of visible air contaminants from diesel-powered motor vehicles of a density equal to or greater than twenty (20) percent opacity for longer than five (5) consecutive seconds after the engine has been brought up to operating temperature.
- (c) *Exemptions*. Mobile sources used solely for ceremonial purposes, antiques and others of historical significance shall be exempt from the provisions of this rule.

(d) The propulsion engine or any vehicle parked in a business or residential area shall not be left running more than three (3) minutes after the vehicle is parked, except when the propulsion engine provides auxiliary service other than for heating or air conditioning.

(1961 Code, § 1A-11; 20-73-1A; 27-78-103.)

Section 103-3-10. Mobile sources.

- (a) Prohibition of visible emissions from mobile sources. No person shall cause or permit the emission of visible air contaminants from a mobile source of a density equal to or greater than twenty (20) percent opacity for longer than five (5) consecutive seconds after the operating engine of the mobile source has been brought up to operating temperature.
- (b) Prohibition of idling engines of mobile sources. The operating engine of any mobile source shall not be left idling more than three (3) minutes after the mobile source has ceased to perform its designed work or function. (27-78-103.)

Section 103-3-11. Open burning.

- (a) Prohibition of open burning.
- (1) No person or owner shall kindle or ignite, cause to be ignited, permit to be ignited, or maintain any open fire in any public or private place outside any building. In instances wherein the burning outside a building may be permissible under the provisions of this Chapter, either as an exception to the general proscription against open burning as provided in Subsection (b) herein, or as controlled burning as provided in Subsection (c) herein, or pursuant to a variance authorized under the provisions of Subsection (c) herein, such burning shall not include the burning of tires, asphaltic materials, automobile bodies, used crankcase oil, impregnated wood or similar materials which produce dense smoke, when subjected to open burning nor shall salvage operations by burning be permitted.
- (2) Open burning under the exceptions of Subsection (b) herein does not exempt or excuse a person from the consequences, damages or injuries which may result from such conduct, nor does it excuse or exempt any person from complying with all applicable laws, ordinances, regulations, and orders of the Chief Fire Marshal and the State Forester and other's having jurisdiction, even though the open burning is conducted in compliance with Subsection (b) herein.

- (3) All open burning permitted under Subsection (b) herein, Exceptions, shall be immediately terminated upon the declaration by competent authority that the "Alert" stage of the Air Pollution Episode has been reached.
- (b) Exceptions.
- (1) Open fires may be set in performance of an official duty of any public health or safety officer if the fire is necessary for one or more of the following reasons or purposes:
 - (A) For the prevention of a fire hazard which cannot be abated by other means;
 - (B) For the instruction of public fire fighters or industrial employees under supervision of the Director of Fire Services; or
 - (C) For the protection of public health.
- (2) Fires may be used for the cooking of food, provided no smoke violation or other nuisance is created.
- (3) Salamanders or other devices may be used for heating by construction or other works, provided no smoke violation or other nuisance is created.
- (4) Fires may be set in the course of agricultural operations in growing crops or raising fowl or animals, provided no nuisance is created and the agricultural operation meets the requirements established by the Director.
- (5) Open fires may be set for recreational purposes or for ceremonial occasions, provided no smoke violation or nuisance is created.
- (c) Controlled burning. The Director, and the Chief Fire Marshal, in concurrence, may approve the use of controlled burning equipment such as the Air Curtain Destructor or Pit Incinerator for the destruction and reduction of land clearing wastes for a period of up to one (1) year for each installation. All terms and conditions stated on the controlled burning application and approved permit are incumbent upon the permittee and failure to comply could result in corrective action by either approving official. This equipment must meet the visible emission regulations of this Code and other limitations or conditions as the Director or the Chief Fire Marshal may impose.
- (d) *Exclusions*. Where alternate means of disposal are not economical or practical and when it is the best interests of the citizens of Fairfax County, the Director with concurrence of the State Air Pollution Control Board, the Chief Fire Marshal, and the State Forester, may permit open burning to dispose of debris caused by floods, tornadoes, hurricanes or other natural disasters under such conditions as may be prescribed by the State Air Pollution Control Board.

Section 103-3-12. Air pollution episode system.

- (a) General requirements.
- (1) An air pollution episode system provides standards and procedures to be followed whenever pollution of the air has the potential of reaching an emergency condition if allowed to go unchecked.
- Whenever the Director or his designated representative determines the accumulation of air pollution may attain, is attaining or has attained a level or levels considered injurious to human health, conditions of air pollution designated as Forecast, Health Advisory, Alert, warning and Emergency shall be declared. In making a determination, the criteria defined in Subsection (b) herein shall be used as guidelines. Any stage may be declared by the Director on the basis of deteriorating air quality alone if in his judgment such action is required.
- (3) To provide a logical means of emission reduction by stationary air pollution sources during the various stages of the air pollution episode system, sources designated by the Director shall submit standby emission reduction plans in accordance with Section 7.03 of the Commonwealth of Virginia Regional Air Pollution Control Regulations.
- (b) Episode criteria.
- (1) Forecast stage.
 - (A) An administrative watch shall be maintained by the Director whenever the national, local or state meteorologist issues a forecast indicating an atmosphere stagnation will cover any substantial portion of the Commonwealth of Virginia for the next thirty-six (36) hours. Such a weather forecast will indicate meteorological conditions which are expected to inhibit local pollutant dispersion. The watch shall continue throughout the atmospheric stagnation period. The forecast will take the form of:
 - (i) An Atmospheric Stagnation Advisory for the next thirty-six (36) hours including any substantial part of the Commonwealth of Virginia issued by the National Meteorological Center (NMC), and
 - (ii) A regional twelve (12) hour Air Stagnation Advisory including any substantial part of Northern Virginia issued by the local meteorologist.

- (B) Action. The Director shall accelerate the manual sampling of air pollutants and coordinate his findings with neighboring jurisdictions and the Weather Bureau.
- (2) Health Advisory Stage.
 - (A) A Health Advisory Stage shall be declared by the Director when the one-hour average oxidant pollutant level reaches two hundred (200) μg/m³ (0.1 ppm) at any monitoring site concurrent with:
 - (i) Consultation with the national, local or staff meteorologist which indicates that an atmospheric stagnation exists and/or
 - (ii) A determination by the Director that the pollutant level is representative of air quality in the Air Quality Control Region. Consultation with the air pollution control agencies of the affected jurisdictions will be accomplished to help evaluate local situations.
 - (B) Action. During this stage the Director will consult with the agencies of the affected State and local jurisdictions, and may take action as outlined in the alert stage if it is determined to be in the best interest of the citizens of the County.
- (3) Alert stage.
 - (A) An Alert shall be declared by the Director or his authorized agent when any one of the following pollutant levels is reached at any monitoring site, and
 - (i) Consultation with the national, local or state meteorologist indicates that an atmospheric stagnation exists for the next twelve (12) hours or more and/or

(ii) The Director or his authorized agent determines that the pollutant level is representative of air quality in a significant portion of the Region. Consultation with the air pollution control agencies of the affected jurisdictions will be accomplished to help evaluate local situations.

Pollutant	Average	μg/m ³	ppm
SO_2	24 hour	800	0.3
Particulates	24 hour	375	(3.0 COH*)
Product of $SO_2 \times$	24 hour	65,000	(0.2 COH-ppm product)
Particulates			
CO	8 hour	17,000	15.0
Oxidants	1 hour	400	0.2
NO_2	1 hour	1,130	0.6
NO ₂	24 hour	282	0.15

^{*} Coefficient of haze per 1,000 linear feet. It is a measure of the loss of visibility due to suspended particulates in the atmosphere.

- (B) Action. When the Alert stage has been declared the following provisions shall apply:
 - (i) The action provision of the Forecast stage shall continue to apply.
 - (ii) No open burning shall be allowed.
 - (iii) The Director shall advise the County Executive who shall direct the Directors of Public Works, Building and Mechanical Inspections and Traffic Departments and the Chief of the Police Department and the Fire Marshal to take appropriate actions within their power, to help abate the level of air pollution.
 - (iv) Implement appropriate section of emission reduction plan.
- (4) Warning stage.
 - (A) A Warning shall be declared by the Director or his authorized agent when any one of the following pollutant levels is reached at any monitoring site, and
 - (i) Consultation with the national, local or state meteorologist indicates that an atmospheric stagnation exists for the next twelve (12) hours or more and/or

(ii) The Director or his authorized agent determines that the pollutant level is representative of air quality in a significant portion of the Region. Consultation with the air pollution control agencies of the affected jurisdictions will be accomplished to help evaluate local situations.

Pollutant	Average	μg/m ³	ppm
SO_2	24 hour	1,600	0.6
Particulates	24 hour	625	(5.0 COH)
Product of $SO_2 \times$	24 hour	261,000	(0.8 COH-ppm product)
Particulates			
CO	8 hour	34,000	30.0
Oxidants	1 hour	800	0.4
NO ₂	1 hour	2,260	1.2
NO ₂	24 hour	565	0.3

- (B) Action. When the Warning stage has been declared the following provisions shall apply:
 - (i) The action provisions of the Forecast and Alert stages shall continue to apply.
 - (ii) The Director shall establish an Air Pollution Control Center in the Health Department to provide information and advice on how to alleviate the effects of the pollutant level.
 - (iii) The Health Department shall increase its investigations of the sources of air pollution.
 - (iv) The Director shall advise public, commercial, and industrial establishments to suspend, or reduce their level of pollutant emissions to the minimum essential level of operation in accordance with preplanned emission reduction schedules.
 - (v) The Director shall notify local hospitals of the possible effect that the air pollution level might have on their case load.
- (5) Emergency stage.
 - (A) An Emergency shall be declared by the Director when any one of the following pollutant levels is reached at any monitoring site, and
 - (i) Consultation with the national, local or state meteorologist indicates that an atmospheric stagnation exists for the next twelve (12) hours or more and/or

- (ii) The Director or his authorized agent determines that the pollutant level is representative of air quality in a significant portion of the Region. Consultation with the air pollution control agencies of the affected jurisdictions will be accomplished to help evaluate local situations, and
- (iii) The concentration of that pollutant is continuing to increase, and the Director determines that because of meteorological or other factors the concentration of that pollutant will continue to increase.

Pollutant	Average	μg/m ³	ppm
SO_2	24 hour	2,100	0.8
Particulates	24 hour	825	(7.0 COH)
Product of SO ₂ ×	24 hour	393,000	(1.2 COH-ppm product)
Particulates			
CO	8 hour	46,000	40.0
Oxidants	1 hour	1,00	0.5
NO ₂	1 hour	3,000	1.6
NO ₂	24 hour	750	0.4

- (B) Action. When the Emergency stage has been declared the following provisions shall apply:
 - (i) The action provision of the Forecast, Alert and Warning stages shall continue to apply.
 - (ii) The Director shall mobilize all resources of his department and may operate his department on an overtime basis.
 - (iii) The Director shall recommend to the proper authorities the closing of all schools, nonessential public buildings and places of public assembly.
 - (iv) The Director shall notify local hospitals that it may be advisable to delay all but emergency surgery because of the possible increased risks resulting from the pollution levels.
 - (v) The Director shall advise the public to limit the use of motor vehicles to essential and emergency travel.
 - (vi) The Director may order a ban on the use of all incinerators, except municipal, if in his professional judgment he has reason to believe that it is necessary to protect the public health.
- (6) Announcement of stages and terminations.

- (A) Termination of any or all stages of the Air Pollution Episode System shall be called by the Director or his authorized agent based on:
 - (i) Consultation with the national, local or state meteorologist which indicates that the atmospheric conditions justify termination and/or
 - (ii) Appropriate reduction in pollutant levels below the stage criteria terminated. The Director shall, upon termination of any stage, declare what stage, if any, of the County's Air Pollution Episode System is still in effect.
- (B) Whenever the Director declares that any stage of the County's Air Pollution Episode System, other than the Forecast stage, is in effect or is terminated he shall announce it immediately to the area radio and television stations and newspapers so that the public will be informed. The declaration of any stage but the Forecast stage shall include:
 - (i) A statement of the effect on public health that might result unless preventive action is taken.
 - (ii) A statement of the action provisions of the declared stage.
 - (iii) A statement listing actions that people in the County should take to lower the pollution level and minimize its effects.
- (7) Determination of pollutant levels. The pollutant levels for the Alert, Warning and Emergency stages shall be determined from instrument readings at sites representative of ambient air quality in the County. (1961 Code, § 1A-13; 20-73-1A; 27-78-103.)

Section 103-3-13. Operation of equipment.

- (a) *General.* Any equipment that may produce air pollutants shall not be maintained in such a manner that a nuisance is created. Nothing in this Section of this Chapter relating to regulation of emission of air contaminants shall in any manner be construed as authorizing or permitting the creation or maintenance of a nuisance.
- (b) Malfunction of equipment. Emissions exceeding any of the limits established in this Chapter as a direct result of unusual conditions in or malfunction of any incinerator or any process, fuel-burning, or control equipment or related operating equipment beyond the control of the person owning or operating such equipment shall not be deemed to be in violation of this Section, provided that the owner or operator advises the Director immediately and within forty-eight (48) hours submits to the

Director a written statement of the circumstances and outlines a corrective and preventive program acceptable to the Director.

- (c) Failure to operate installed Air Pollution Control Equipment. It shall be unlawful for an owner or operator to operate any equipment, incinerator, machinery, device or source unless the control equipment installed is in good working order and functioning as designed. Negligence by the owner or operator shall not be deemed as a malfunction as provided for in Section 103-3-13(b) of this Code.
- (d) Charbroilers. No person shall cause or permit the emission from any charbroiler of (a) visible air contaminants of a density equal to or greater than ten (10) percent opacity at any time, or (b) any odor objectionable to individuals of ordinary sensibility without employing adequate measures for the control of odorous emissions. Charbroilers included in this provision are those high-temperature heat sources with a total grill area of five (5) or more square feet (0.46 or more square meters).
- (e) *Circumvention*. No owner shall build, erect, install or use any article, equipment or other contrivance to conceal an unlawful emission without resulting in a reduction in the total release of air pollutants into the atmosphere. (1961 Code, § 1A-14; 20-73-1A; 27-78-103.)

Section 103-3-14. Registration; permits for new sources and modifications; compliance with State and Federal standards; monitoring records generally.

- (a) Owners engaged in operations which may result in air pollution shall, if so required, register with the Director such sources providing information as to:
 - (1) Location and description of source;
 - (2) Rate, duration and composition of contaminant emission; and
 - (3) Such other information as the Director may require in accordance with the Commonwealth of Virginia Air Pollution Control Regulations.
- (b) No owner shall commence, or permit the commencement of, modification, construction or reconstruction of any air pollution sources without first obtaining from the Director, with the concurrence of the State Air Pollution Control Board, a permit approving the location and basic pollution control design criteria of the proposed new source and modification of an existing source and its operation. Standards for granting the permit shall be in accordance with Section 2.33--Permits--Stationary Sources and Indirect Sources of the Commonwealth of Virginia Regional Air Pollution Regulations. For new and modified stationary sources the Federal standards of performance, where promulgated, shall apply. Where Federal standards of performance have not been promulgated, the source shall employ the best available control technology for the abatement and control of emissions.

- (c) All new sources constructed after the effective date of this Chapter must comply with appropriate performance standards or best technically achievable control, whichever is applicable, on commencement of operation. The owner or operator of existing sources not in compliance as of effective date of this Chapter must submit to the Director in a form and manner satisfactory to the Director, a control program and schedule to contain a date on or before which full compliance will be attained. Control programs will be submitted in accordance with Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. If approved by the Director with the concurrence of the State Air Pollution Control Board, the schedule(s) of compliance contained in the Control Plan will be the date(s) on which the person shall comply.
- (d) The Director may require the owner or operator of any source to install, use, and maintain monitoring equipment and sample emissions in accordance with approved methods; and maintain records and make periodic emission reports. (1961 Code, § 1A-15; 20-73-1A; 27-78-103.)

Section 103-3-15. Inspections.

Any duly authorized officer, employee, or representative of the Division or the Director may, when granted permission by the owner, or some person with reasonably apparent authority to act for the owner, enter and inspect any property, premises or place at any reasonable time for the purpose of investigating or testing either an actual or suspected source of air pollution, or of ascertaining the state of compliance with this Chapter and regulations enforced pursuant thereto. When permission is refused or cannot be obtained, a proper warrant shall be obtained. (1961 Code, § 1A-16; 20-73-1A; 27-78-103.)

Section 103-3-16. Enforcement procedures of Director.

- (a) Whenever the Director has reason to believe that a violation of any provision of this Chapter or a rule or regulation issued pursuant thereto, has occurred, he may give notice of such violation to the owner failing to comply with this Chapter, ordering him to take such corrective measures as are necessary within a prescribed time thereafter.
- (b) Such notice and order shall be in writing and shall be served personally agreed upon the person to whom directed, or if he be not found, by mailing a copy thereof by certified mail to his usual place of abode and conspicuously posting a copy at the premises affected by the notice and order or served upon him by any manner allowed by law.
- (c) If such person fails to comply with the order issued hereunder, the Director shall institute such actions as may be necessary to terminate the violation, and failure on the part of such person to take steps to comply with such order within the time provided for therein shall constitute a separate violation of this Chapter. If such person complies with such order promptly, no further action to terminate the violation shall be

required, but compliance shall not be deemed to inhibit prosecution of such person for the violation.

(d) Nothing in this Chapter shall prevent the Director from making efforts to obtain voluntary compliance through warning, conference, or any other appropriate means.

(1961 Code, § 1A-17; 20-73-1A; 27-78-103.)

Section 103-3-17. Emergency procedures.

Notwithstanding the provisions of this Chapter or any other provision of law, if the Director finds that any owner or person is causing or contributing to air pollution and that such pollution creates an emergency which requires immediate action to protect the public health or safety, he shall order such person to reduce or discontinue immediately the air pollution and such order shall be complied with immediately. Upon issuance of any such order, the Director, if requested by the person so ordered, shall fix a time and place for a hearing before the Air Pollution Control Board of the County, such hearing to be held within a reasonable time thereafter. Not more than twenty-four (24) hours after the conclusion of such a hearing, and without adjournment thereof, the order shall be affirmed, modified or set aside.

(12-13-67; 1961 Code, § 1A-18; 20-73-1A; 27-78-103.)

ARTICLE 4.

Air Pollution Control Board.

Section 103-4-1. Air Pollution Control Board; established; composition; terms of office; conduct of Board; appeals procedure.

- (a) Creation, membership and terms of office. There is hereby created and established the Air Pollution Control Board of the County, hereinafter referred to as the "Board," which shall consist of five (5) members, all of whom shall reside in and be residents of the County. The members shall be appointed by the Board of Supervisors and of the first appointed, one (1) shall be appointed to serve for one (1) year, two (2) for two (2) years, and two (2) for three (3) years each. Vacancies shall be filled by the Board of Supervisors for the unexpired portion of a term.
- (b) Conduct of Board. The Board shall elect its chairman from among its membership. All members of the Board shall be entitled to vote and its decisions shall be determined by a majority vote of the members present. A quorum of three (3) members present is required before the Board may take any official action. All meetings of the Board shall be open to the public and a full and impartial hearing shall be granted on all appeals. Insofar as reasonably possible, all hearings shall be informal and free from technical rules of law and evidence. When voting on any question, the determination shall be made viva voce. No proxy shall

be allowed at any time. The Board shall keep minutes of its proceedings and all findings, decisions and orders shall be reduced to writing and entered as a matter of public record in the office of the Director. In matters concerning the procedure for meetings not covered by this Section, the Board may establish its own rules; provided, that they are not contrary to the spirit of this Section.

- (c) Appeals to Board. Any person affected by any notice or order which has been issued in connection with the enforcement of any provision of the Chapter may request and shall be granted a hearing on the matter by the Board; provided, that such person shall, within ten (10) days after service of a notice and order, file in the office of the Director a signed written notice of appeal or shall appear there in person, requesting a hearing and setting forth a brief statement of the reasons thereof. Upon receipt of such notice of appeal, the Director shall forthwith notify the Board, and the Board shall set a time and place for such hearing and shall give the person appealing and the Director notice thereof. The Board shall schedule hearings for and determine such appeals as promptly as practicable.
- (d) The Board in the administration and enforcement of this Chapter shall take into consideration all of the facts and circumstances bearing upon the reasonableness of the activity involved and the orders proposed to control it, including:
 - (1) The character and degree of injury to, or interference with safety, health or the reasonable use of property which is caused or threatened to be caused;
 - (2) The suitability or unsuitability of such activity to the area in which it is located; and
 - (3) The practicability, both scientific and economic, of reducing or eliminating the discharge resulting from such activity.
- (e) After such hearing the Board may affirm, amend, modify or withdraw the notice of order appealed from. The decision of the Board shall constitute an order and any person who shall fail, refuse or neglect to comply with any such order shall be guilty of violating the provisions of this Chapter, and shall be punished in accordance with Section 103-5-7.

(12-13-67; 1961 Code, § 1A-19; 20-73-1A; 27-78-103.)

Section 103-4-2. Grant of variances by Board.

(a) Any owner or person responsible for any source of air contaminant may apply to the Board for a variance or partial variance from the provisions of Section 103-3-11 of this Chapter. The application shall be accompanied by such information and data as the Board may require. The variance shall only be granted if, after a public hearing, the Board determines that:

- (1) The discharge occurring or proposed to occur does not constitute a danger to the public health or safety; and
- (2) Strict compliance with Section 103-3-11 of this Chapter from which the variance is sought would create any unreasonable hardship on the applicant with little or no benefit to the public from its denial.
- (b) No variance or partial variance issued pursuant to Subsection (a) shall be granted for a period exceeding one (1) year.
- (c) Nothing in this Section and variances granted pursuant hereto shall be construed to prevent or limit the application of the emergency provisions and procedures of Section 103-3-17 of this Chapter to any person or his property.
- (d) Nothing in this Section or in variances granted pursuant hereto shall be construed to excuse or exempt an owner or person responsible for any sources of air contaminant from complying with applicable regulation of the Chief Fire Marshal, the Virginia Division of Forestry, or other governmental entities having jurisdiction. (6-2-71; 1961 Code, § 1A-20; 20-73-1A; 27-78-103.)

ARTICLE 5.

Records, Fees, Figures 1 Through 4 and Penalty.

Section 103-5-1. Confidentiality of records.

Any records or other information (except emission data) which relate to processes or production unique to the owner or operator or which would tend to affect adversely the competitive position of such owner or operator and which are so designated by him shall be only for the confidential use of the Division and other departments, agencies and officers of the County unless such owner or operator shall expressly agree to their publication or availability to the general public. Nothing herein shall be construed to prevent the use of such records or information by any department, agency, or officer of the County in compiling or publishing analyses or summaries do not reveal any information otherwise confidential under this Section.

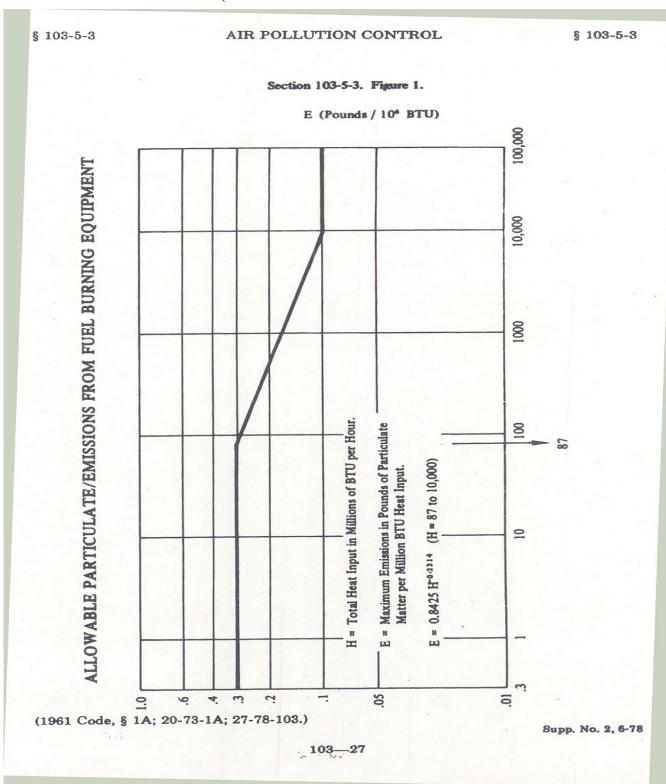
(12-13-67; 1961 Code, § 1A-21; 20-73-1A; 27-78-103.)

Section 103-5-2. Fees.

Fees shall be paid for permits as provided in Section 6, Building Chapter, of the Fairfax County Code [Chapter 61].

(12-13-67; 1961 Code, § 1A-22; 20-73-1A; 27-78-103.)

Section103-5-2. Figure 1. E (Pounds / $10^{\,\mathrm{BTU})}$



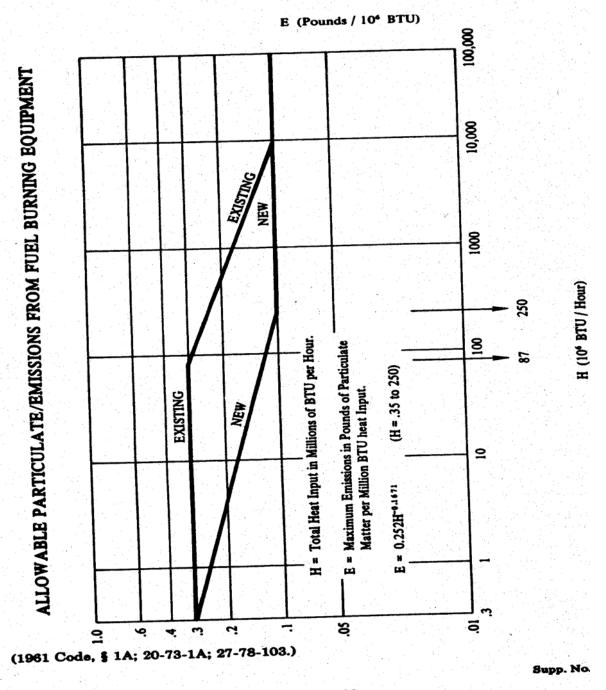
Section103-5-4. Figure 2. E (Pounds / $10^{\rm BTU}$)

§ 103-5-4

FAIRFAX COUNTY CODE

§ 103-5





103-28

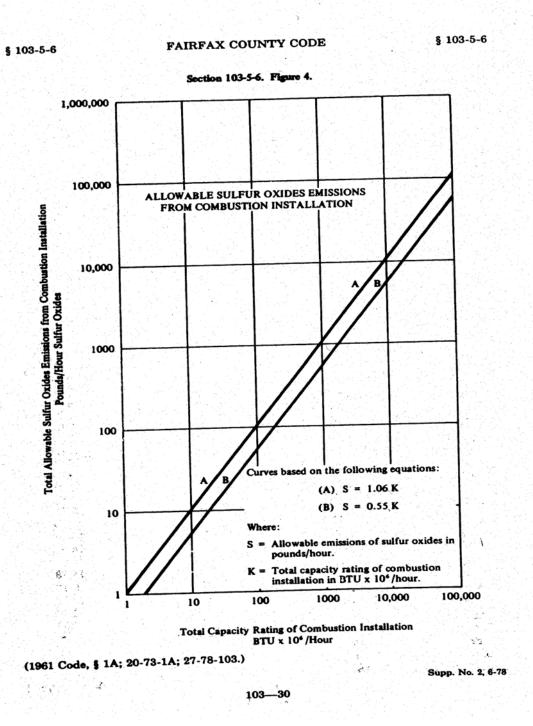
Section 103-5.5. Figure 3.

Process Wt/hr (lbs)	Maximum Weight Disch/hr			
1100000 111/111 (108)	(lbs)			
50	0.24			
100	0.46			
150	0.66			
200	0.85			
250	1.03			
300	1.20			
350	1.35			
400	1.50			
450	1.63			
500	1.77			
550	1.85			
600	2.01			
650	2.12			
700	2.24			
750	2.34			
800	2.43			
850	2.53			
900	2.62			
950	2.72			
1000	2.80			
1100	2.97			
1200	3.12			
1300	3.26			
1400	3.40			
1500	3.54			
1600	3.66			
1700	3.79			
1800	3.91			
1900	4.03			
2000	4.14			
2100	4.24			
2200	4.34			
2300	4.44			
2400	4.54			
2500	4.64			
2600	4.74			
2700	4.84			
2800	4.92			
2900	5.02			
3000	5.10			
3100	5.18			
3200	5.27			
3300	5.36			
3400	5.44			
3500	5.52			
3600	5.61			
3700	5.69			
3800	5.77			
3900	5.85			
4000	5.93			
4100	6.01			
4200	6.08			
4300	6.15			
4400	6.22			
4500	6.30			

4600	6.37
4700	6.45
4800	6.52
4900	6.60
5000	6.67
5500	7.03
6000	7.37
6500	7.71
7000	8.05
7500	8.39
8000	8.71
8500	9.03
9000	9.36
9500	9.67
10000	10.00
11000	10.63
12000	11.28
13000	11.89
14000	12.50
15000	13.13
16000	13.74
17000	14.36
18000	14.97
19000	15.58
20000	16.19
30000	22.22
40000	28.30
50000	34.30
60000 or more	40.00

Section 103-5-6. Figure 4.

$\begin{array}{c} Total \ Capacity \ Rating \ of \ Combustion \ Installation \\ BUT \times 10^6/Hour \end{array}$



Section 103-5-7. Penalties.

Any violation of the provisions of this Chapter shall constitute a misdemeanor and any person violating this Chapter shall, upon conviction thereof be subject to a fine not to exceed One Thousand Dollars (\$1,000.00), or imprisonment not to exceed thirty (30) days or both. Each separate act on the part of the person violating the provisions of this Chapter shall be deemed a separate offense, and notwithstanding that there may be no additional affirmative acts, each day a condition constituting a violation is permitted to continue unabated shall be deemed to constitute a separate offense. (8-4-71; 9-22-72; 1961 Code, § 1A-23; 20-73-1A; 40-74-1A; 27-78-103.)

Section 103-5-8. Restraining violations of Chapter.

Any violation or attempted violation of any provision of this Chapter may be restrained, corrected or abated as the case may be by injunction or other appropriate proceeding.

(12-13-67; 1961 Code, § 1A-24; 20-73-1A; 27-78-103.)

ARTICLE 6.

Air Quality Standards for Pollutants.

Section 103-6-1. Ambient air quality standards.

- (a) The provisions of this part, unless specified otherwise, shall be applicable throughout the County of Fairfax.
- (b) Ambient air quality standards are required to assure that ambient concentrations of air pollutants are consistent with established criteria and such standards shall serve as the basis for effective and reasonable management of the air resources of the County of Fairfax.
- (c) Primary ambient air quality standards define levels of air quality which, allowing an adequate margin of safety, are necessary to protect the public health. Secondary ambient air quality standards define more stringent levels of air quality which are necessary to protect the public welfare from any known or anticipated adverse effects associated with the presence of air pollutants in the ambient air. At such time as additional pertinent information becomes available with respect to applicable air quality criteria, such information will be considered and the ambient air quality standards will be revised accordingly.
- (d) The absence of a specific ambient air quality standard shall not preclude action by the Director to control pollutants to assure protection, safety, welfare and comfort of the people of the County of Fairfax.

(e) Where applicable, all measurements of air quality shall be corrected to a reference temperature of twenty (20) degrees Celsius (68°F), and to a reference pressure of seven hundred sixty (760) mm of Hg (29.92 in. of Hg) or fourteen and seven-tenths (14.7) pounds per square inch absolute. Temperature of twenty (20) degrees Celsius (68°F) and a pressure of seven hundred sixty (760) mm of Hg (29.92 in. of Hg). (27-78-103.)

Section 103-6-2. Particulate matter.

- (a) Primary and Secondary ambient air quality standards are:
- (1) Sixty (60) micrograms per cubic meter-annual geometric mean, as a guide to be used in assessing achievement of the twenty-four (24) hour standard in Paragraph (a)(2) of this section.
- (2) One hundred fifty (150) micrograms per cubic meter-maximum twenty-four (24) hour concentration not to be exceeded more than once per year.
- (b) Particulate matter shall be measured by the reference method described in Appendix B of 40 CFR Part 50, or other method designated as such, or by an equivalent method. (27-78-103.)

Section 103-6-3. Sulfur oxides (sulfur dioxide).

- (a) Primary ambient air quality standards are:
- (1) Eighty (80) micrograms per cubic meter (0.03 ppm)--annual arithmetic mean.
- (2) Three hundred sixty-five (365) micrograms per cubic meter (0.14 ppm)-maximum twenty-four (24) hour concentration not to be exceeded more than once per year.
- (b) Secondary ambient air quality standard is thirteen hundred (1,300) micrograms per cubic meter (0.50 ppm)--maximum three-hour concentration not to be exceeded more than once per year.
- (c) Sulfur dioxide shall be measured by the reference method described in Appendix A of 40 CFR Part 50, or other method designated as such, or by an equivalent method. (27-78-103.)

Section 103-6-4. Carbon monoxide.

(a) Primary and secondary ambient air quality standards are:

- (1) Ten (10) milligrams per cubic meter (9 ppm)--maximum eight-hour concentration not to be exceeded more than once per year.
- (2) Forty (40) milligrams per cubic meter (35 ppm)--maximum one-hour concentration not to be exceeded more than once per year.
- (b) Carbon monoxide shall be measured by the reference method described in Appendix C of 40 CFR Part 50, or other method designated as such, or by an equivalent method. (27-78-103.)

Section 103-6-5. Photochemical oxidants.

- (a) Primary and secondary ambient air quality standard is one hundred sixty (160) micrograms per cubic meter (0.08 ppm)--maximum one-hour concentration not to be exceeded more than once per year.
- (b) Photochemical oxidants shall be measured by the reference method described in Appendix D of 40 CFR Part 50, or other method designated as such, or by an equivalent method. (27-78-103.)

Section 103-6-6. Hydrocarbons.

- (a) Primary and secondary ambient air quality standard for hydrocarbons is one hundred sixty (160) micrograms per cubic meter (0.24 ppm)--maximum three-hour concentration (6--9 a.m.) not to be exceeded more than once per year.
- (b) Hydrocarbons shall be measured by the reference method described in Appendix E of 40 CFR Part 50, or other method designated as such, or by an equivalent method.
- (c) The hydrocarbon ambient air quality standard is for use as a guide in determining hydrocarbon emission control required to achieve the photochemical oxidant standard. (27-78-103.)

Section 103-6-7. Nitrogen dioxide.

(a) Primary and secondary ambient air quality standard is one hundred (100) micrograms per cubic meter (0.05 ppm)--annual arithmetic mean.

(b) Nitrogen dioxide shall be measured by the reference method described in Appendix F of 40 CFR Part 50, or other method designated as such, or by an equivalent method. (27-78-103.)

ARTICLE 7.

New Stationary Sources and Hazardous Pollutant Standards.

Section 103-7-1. General: new source performance standards.

- (a) The Environmental Protection Agency Regulations on Standards of Performance for new Stationary Sources (40 CFR, Part 60) and Part V, Rule NS-3, Pages 75-76-76A-76B of Virginia State Air Pollution Control Board Regulations, are hereby incorporated by reference into Chapter 103 of the 1976 Code of the County of Fairfax concerning Air Pollution Control. The numbers appearing next to each source category in Section 103-7-1(b) identify the Federal Register items, listed in Appendix A, which pertain specifically to that source category. All wording, actions, submissions, and other requirements made incumbent upon a person or owner by the Virginia State Air Pollution Control Board, are by this incorporation made incumbent upon a person or owner by the Director..
 - (b) Designated standards of performance.
- (1) Fossil-Fuel Fired Steam Generators (units of more than 250 million BTU per hour heat input)
- (2) Incinerators (units of more than fifty (50) tons per day charging rate)
- (3) Portland Cement Plants
 (kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems)
- (4) Nitric Acid Plants (nitric acid production units)
- (5) Sulfuric Acid Plants (sulfuric acid production units)

- (6) Asphalt Concrete Plants
- (dryers; systems for screening, handling, storing and weighing hot aggregate; systems for loading, transferring and storing mineral filler; systems for mixing asphalt concrete; and the loading, transfer and storage systems associated with emission control systems)
 - (7) Petroleum Refineries
- (fluid catalytic cracking unit catalyst regenerators, fluid catalytic cracking unit incinerator-waste heat boilers and fuel gas combustion devices)
- (8) Storage Vessels for Petroleum Liquids (storage vessels with a capacity greater than forty thousand (40,000) gallons)
- (9) Secondary Lead Smelters
 (pot furnaces of more than five hundred fifty (550) pounds charging capacity, blast cupola) furnaces and reverberatory furnaces)
- (10) Secondary Brass and Bronze Ingot Production Plants (reverberatory and electric furnaces of two thousand two hundred five (2,205) pounds or greater production capacity and blast (cupola) furnaces of five hundred fifty (550) pounds per hour or greater production capacity)
- (11) Iron and Steel Plants (basic oxygen process furnace)
- (12) Sewage Treatment Plants (incinerators which burn the sewage produced by municipal sewage treatment facilities)
- (13) Primary Copper Smelters (dryer, roaster, smelting furnace and copper converter)
- (14) Primary Zinc Smelters (roaster and sintering machine)
- (15) Primary Lead Smelters
 (sintering machine, sintering machine discharge end, blast furnace, dross reverberatory furnace, electric smelting furnace and converter)
- (16) Primary Aluminum Reduction Plants (potroom groups and anode bake plants)
- (17) Phosphate Fertilizer Industry:Wet-Process Phosphoric Acid Plants (reactors, filters, evaporators and hotwells)
- (18) Phosphate Fertilizer Industry:Superphosphoric Acid Plants (evaporators, hotwells, acid sumps and cooling tanks)

- (19) Phosphate Fertilizer Industry:Diammonium Phosphate Plants (reactors, granulators, dryers, coolers, screens and mills)
- (20) Phosphate Fertilizer Industry:Triple Superphosphate Plants (mixers, curing belts (dens), reactors, granulators, dryers, cookers, screens, mills and facilities which store run-of-pile triple superphosphate)
- (21) Phosphate Fertilizer Industry:Granular Triple Superphosphate Storage Facilities (storage or curing piles, conveyors, elevators, screens and mills)
 - (22) Coal Preparation Plants
- (plants which process more than two hundred (200) tons per day; thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems and coal transfer and loading systems)
- (23) Ferroalloy Production
 (electric submerged arc furnaces which produce silicon metal, ferrosilicon, calcium silicon, silicomanganese zirconium, ferrochrome silicon, silvery iron, high-carbon ferrochrome, charge chrome standard ferromanganese, silimanganese, ferromanganese silicon or calcium carbide; and dust-handling equipment)
- (24) Steel Plants: Electric Arc Furnaces (electric arc furnaces and dust-handling equipment)
 - (25) Reference Methods
 - (26) Performance Specifications
- (c) *Word or phrase substitutions:* In all of the standards designated in Section 103-7-1(b), substitute:
 - (1) Owner or other person for owner or operator.
 - (2) Section 103-1-5 for Part I and Subpart A.
 - (3) Director for Board and Administrator.
 - (4) Director for Board and U.S. Environmental Protection Agency (except in references).
 - (5) Section 103-3-14 for 5.03 and 60.8.

- (6) Section 103-3-14 for 5.05(c) and 60.7(c).
- (7) Section 103-3-14 for 5.04 and 60.13. (27-78-103.)

Section 103-7-2. Hazardous pollutant standards.

- (a) The Environmental Protection Agency Regulations on National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61) and Part VI, Rule HP-1 & 2, Pages 79-80-80A-80B of the Virginia State Air Pollution Control Board Regulations are hereby incorporated by reference into Chapter 103 of the 1976 Code of the County of Fairfax concerning Air Pollution Control. The numbers appearing next to each source category in Section 103-7-2(b), identify the Federal Register items, listed in Appendix A, which specifically pertain to that source category. All wording, actions, submissions, and other requirements made incumbent upon a person or owner by the Virginia State Air Pollution Control Board, are by this incorporation made incumbent upon a person or owner by the Director.
 - (b) Designated emission standards.
 - (1) Asbestos;
 - (2) Beryllium;
 - (3) Beryllium Rocket Motor Firing;
 - (4) Mercury;
 - (5) Test Methods;
 - (6) Vinyl Chloride.
- (c) *Word or phrase substitution.* In all of the standards designated in Section 103-7-2(b) substitute:
 - (1) Owner or other person for owner or operator.
 - (2) Section 103-1-5 for Part 1 and Subpart A.
 - (3) Director for Board and Administrator.
 - (4) Director for Board and U.S. Environmental Protection Agency (except in reference).
 - (5) Section 103-3-14 for 2.33 and 6.04 and 61.05(a), 61.07 and 61.09.

(6) Sections 103-3-14 for 6.03 and 61.14. (27-78-103.)

APPENDIX A.

Environmental Protection Agency And Virginia State Air Pollution Control Board- References Documents

The complete text of EPA regulations incorporated into these regulations is contained in the following Federal Register items (available in most public libraries):

40 CFR PART 60

- (1), (2), (3), (4), (5)--36 FR 24876, December 23, 1971.
- (1)--37 FR 14877, July 26, 1972.
- (4), (5)--38 FR 13562, May 23, 1973.
- (1), (4), (5)--38 FR 28564, October 15, 1973.
- (6), (7), (8), (9), (10), (11), (12)--39 FR 9308, March 8, 1974.
- (8), (9), (12)--39 FR 13776, April 17, 1974.
- (12)--39 FR 15396, May 3, 1974.
- (1), (2), (3), (4), (5), (8)--39 FR 20790, June 14, 1974.
- (3)--39 FR 39872, November 12, 1974.
- (1)--40 FR 2803, January 16, 1975.
- (17), (19), (20), (21)--40 FR 33152, August 6, 1975.
- (24)--40 FR 43850, September 23, 1975.
- (1), (3), (4), (5), (6), (7), (9), (10), (12), (26)-40 FR 46250, October 6, 1975.
- (1), (26)--40 FR 59204, December 22, 1975.
- (22)--41 FR 2232, January 15, 1976.
- (13), (14), (15)--41 FR 2332, January 15, 1976.

- (16)--41 FR 3826, January 26, 1976.
- (13)--41 FR 8346, February 26, 1976.
- (23)--41 FR 18498, May 4, 1976.
- (23)--41 FR 10659, May 20, 1976.
- (1)--41 FR 51397, November 22, 1976.
- (1)--41 FR 52299, November 29, 1976.

40 CFR PART 61

- (1), (2), (3), (4), (5)--38 FR 8820, April 6, 1973.
- (1)--39 FR 15396, May 3, 1974.
- (1), (4), (5)--40 FR 48292, October 14, 1975.
- (6)--41 FR 46560, October 21, 1976.
- (6)--41 FR 53017, December 3, 1976.
- (27-78-103.)

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9 VAC 5-170-150, Local ordinances.

*11714 9 VAC 5-170-150

VIRGINIA ADMINISTRATIVE CODE TITLE 9. ENVIRONMENT VAC AGENCY NO. 5 STATE AIR POLLUTION CONTROL BOARD CHAPTER 170. REGULATION FOR GENERAL ADMINISTRATION PART VI. BOARD ACTIONS

Current through 19:19 V.A.R. June 2, 2003

9 VAC 5-170-150. Local ordinances.

- A. Local ordinances shall be established and approved as follows:
- 1. The governing body of any locality proposing to adopt an ordinance, or an amendment to an existing ordinance, relating to air pollution shall first obtain the approval of the board as to the provisions of the ordinance or amendment. Except for an ordinance or amendment pertaining solely to open burning, the board shall not approve an ordinance or amendment which regulates an emission source that is required to register with the board or to obtain a permit pursuant to Virginia Air Pollution Control Law and the regulations of the board. The board in approving local ordinances will consider, but will not be limited to, the following criteria:
 - a. The local ordinance shall provide for intergovernmental cooperation and exchange of information.
 - b. Adequate local resources will be committed to enforcing the proposed local ordinance.
- c. The provisions of the local ordinance shall be as strict as state regulations, except as provided for leaf burning in § 10.1-1308 of the Virginia Air Pollution Control Law.
- 2. Approval of a local ordinance shall be withdrawn if the board determines that the local ordinance is less strict than state regulations, or if the locality fails to enforce the ordinance.

- 3. If a local ordinance must be amended to conform to an amendment to state regulations, the local amendment will be made within six months. If the necessary amendment is not made within six months, the board may rescind its approval of the ordinance.
- B. Local ordinances shall provide for reporting information required by the board to fulfill its responsibilities under the Virginia Air Pollution Control Law and the federal Clean Air Act. Reports shall include, but are not limited to monitoring data, surveillance programs, procedures for investigation of complaints, variance hearings, and status of control programs and permits.
- C. Local ordinances are a supplement to state regulations. Provisions of local ordinances which have been approved by the board and are more strict than state regulations shall take precedence over state regulations within the respective locality. It is the intention of the board to coordinate activities among the enforcement officers of the various localities in the enforcement of local ordinances and state regulations. The board will also provide technical and other assistance to local authorities in the investigation and study of air pollution problems, and in the enforcement of local ordinances and state regulations. The board emphasizes its intention to assist in the local enforcement of local ordinances. If a locality fails to enforce its own ordinance, the board reserves the right to enforce state regulations.
- *11715 D. A local governing body may grant a variance to a provision of its air pollution control ordinance provided that:
 - 1. A public hearing is held by the locality prior to granting the variance;
- 2. The public is notified of the application for a variance by advertisement in at least one major newspaper of general circulation in the affected locality and a major newspaper of general circulation in the state capital area at least 30 days prior to the date of the public hearing by the locality; and
- 3. The variance does not permit an owner or other person to take action that would result in a violation of a provision of state regulations unless a variance is granted by the board. The local public hearing required for the variances to the local ordinance and the public hearing required under state regulations may be conducted jointly as one proceeding.

E. This section shall not apply to the approval of local ordinances concerning open burning established pursuant to 9 VAC 5-40-5640 D.

<General Materials (GM) - References, Annotations, or Tables>

STATUTORY AUTHORITY

§ 10.1-1308 of the Code of Virginia.

NOTES

HISTORICAL NOTES

Derived from Virginia Register Volume 14, Issue 3, eff. January 1, 1998; Errata, 14:7 VA.R. 1175 December 22, 1997.